The Bradshaw Lecture

ON

THE UNION OF WOUNDS.

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MR. PRESIDENT AND GENTLEMEN,—It appears to me that there is considerable difference of opinion amongst surgeons and pathologists as to the way in which simple wounds unite, especially as to whether the process of healing is an inflammatory one or not. In selecting a subject for the Bradshaw Lecture this year I thought that I could not do better than discuss this question and see whether by a consideration of the subject we can arrive at some distinct conclusion. I have formed a very definite opinion myself and it remains to be seen whether I shall succeed in winning you round to the same view that I hold.

REPAIR WITH OR WITHOUT INFLAMMATION.

Many surgeons and pathologists, and amongst them some of the most eminent in this country and on the Continent, believe that the union of wounds takes place without inflammation and, indeed, assert that "repair in all its forms is effected without inflammation." These pathologists teach that "repair and inflammation are not only not identical but that they are incompatible; that repair is a constructive physiological process and resembles closely that of development and growth, but that inflammation is a destructive pathological process brought about entirely by micro-organisms introduced from without; and that when it attacks a wound in the process of repair it at first checks repair and later brings about disorganising changes; and when a part repairs after it has been the seat of inflammation it does so only when the inflammatory process has been arrested."[1] Other pathologists, again, hold the opinion that all wounds unite by a process which they regard as inflammation. And while admitting that inflammation is a destructive pathological process they believe nevertheless that the union of wounds takes place by it, and that there is a decrease in the vital activity of the affected tissues, and, as a result, a lower vitality in the product of this inflammatory process—I mean in the scar or connecting medium which binds the severed parts together. There can, I think, be little doubt that John Hunter believed that wounds may heal without inflammation. In fact, in one place he distinctly states in his lectures "that primary healing takes its course without inflammation and is painless." He did not, however, greatly emphasise the fact and appears to have believed that the bond of union in these cases was extravasated blood. He thus describes the process: "The blood"—that is, the blood extravasated into the wound—"being alive, this uniting medium becomes immediately a part of ourselves and the parts not being offended by it no irritation is produced. The red particles are absorbed and nothing but the coagulating lymph is retained, which, being the true living bond of union, afterwards becomes vascular." But John Hunter certainly did not believe that "repair in all its forms is effected without inflammation," for he states that "in many diseases it is the first step towards a cure." I do not propose, however, to weary you further with the opinion of the older pathologists; I prefer rather to limit myself to a consideration of the question as it exists at the present time as to whether wounds heal without inflammation; and I take as my text on which to base our discussion the words of Karl Roser of Marburg, a German pathologist of great repute. He says: "The clean, non-infected wound heals without inflammation by first intention; the infected wound, on the contrary, heals by second intention with the appearances of inflammation. In the first case healing follows immediately after the injury. In the other case inflammation intervenes between injury and healing as a disturbing complication."

Clearly the first point in considering this question is to have a clear and definite understanding of what inflammation is. As you are all aware, Dr. Burdon Sanderson has defined inflammation as the "succession of changes which occurs in a living tissue when it is injured, provided that the injury is not of such a degree as at once to destroy its structure and vitality." Or, more briefly and succinctly, that inflammation is the "response of living tissues to injury." Now, if we accept this definition the whole question falls to the ground at once. Clearly, if this is true, no wound can unite without inflammation—a wound is an injury; therefore, a response must take place, a succession of changes must occur which constitutes inflammation. Those, however, who believe that wounds heal by a strictly physiological and constructive process clearly do not accept this definition of the word and regard inflammation as something else. The older definition of inflammation was that it was that condition which was attended by certain so-called cardinal signs—pain, heat, redness, and swelling—and that we must regard these signs, to again quote the words of Dr. Burdon Sanderson, "as the characteristics of the thing of which the word 'inflammation' is the name." There is no question that these signs do attend or follow a wound, and so again we must admit that if the aggregate of these signs constitutes inflammation, then that there is inflammation during the process of healing of a wound.

The opponents of the theory that wounds heal by inflammation admit that the four cardinal signs of inflammation are present, but they do not admit that therefore there is inflammation. Let me quote to you what Mr. Bryant says in his "Practice of Surgery" on this point. Speaking of wounds he says: "Within an hour or an hour and a half the edges of the wound will be seen to be swollen and slightly red from increased vascularity, and if the connective tissue of the wounded part is loose, as in the eyelids or male genital organs, it will be puffed up and œdematous. To the patient the part will feel hot and stiff and it will be the seat of a dull, aching, or burning pain. The edges of the wound will also probably be more sensitive, the amount of pain depending much upon the tension of the parts and upon the treatment to which they have been subjected. If the edges of the wound have been stitched together and the parts are much swollen and œdematous there will be tension upon the wound and a disposition to separate and gape. In a healthy subject, however, where repair goes on well, all these local phenomena will subside and disappear in the course of two, three, or four days, according to the rapidity and perfection of the healing process, and a cure will then take place. But should the local phenomena above described be more persistent, increase in severity, spread beyond the margins of the wound and surrounding parts, or alter in character for the worse, what has been a physiological reparative process will pass into a pathological or diseased one and the parts will then be said to be inflamed." The opponents of the doctrine of the healing of wounds by inflammation do not therefore hold that the presence of these four signs necessarily constitute inflammation; and no doubt this, in fact, is quite true. They are present in that condition which indeed is the first stage of the inflammatory state, but which may also occur quite independently of it—a condition to which we apply the term "determination," and which is undoubtedly a physiological process and is an element in thousands of actions of daily life and occurs in those conditions where a sudden increase of blood is required for some physiological purpose. Thus, a morsel of food is introduced into the mouth requiring an increased quantity of saliva for its salivation; immediately a determination of blood to the salivary glands takes place, causing a more active secretion and an increased flow of saliva.

The first use of the word "determination" has been attributed to Paré. John Hunter called it the "incipient enlargement of the vessels," and in no part of his treatise on Inflammation does he use the word "determination." He says: "The very first act of the vessels when the stimulus which excites inflammation is applied is, I believe, exactly similar to a blush. It is, I believe, simply an increase of distension beyond their natural size. This effect we see takes place upon many occasions—gentle friction of the skin produces it—gentle stimulating medicines have the same effect." As a German equivalent to the word "determination" Virchow introduced the term "Wallung" (surging) which has been constantly used by his successors. This determination, which we admit is a physiological process, is attended with a sudden afflux of blood to a part and is characterised in consequence

[1] and: Hunterian Oration, 1893.

by certainly, at least, three of the four cardinal signs of inflammation—heat, redness, and swelling, and possibly also in many cases by the fourth also; for, at all events, if there is not actual pain there is an uneasy or abnormal sensation, such as a sensation of fulness about the part. It is evident, therefore, that we are not in a position to say that a part is inflamed because of the presence of these four symptoms. I have alluded somewhat at length to this question of determination because I think it is important, with a view to accuracy of statement, that the employment of the word "determination" should be strictly limited when used in connexion with the inflammatory process to the primary acceleration of the blood-stream in and about an injured part and should not be so extended as to comprise the subsequent stages of retardation resulting in stasis and exudation.

WHAT IS INFLAMMATION?

We have not yet arrived at our definition of inflammation; and, indeed, the difficulty is great in giving a clear and logical definition to this form of disease, although we easily recognise the condition and understand the combination of processes which are taking place in the tissues. I should regard inflammation as a modification of the normal physiological processes in the various tissues of the body resulting from the application of some irritant to the part, this process being attended or followed in most cases by the formation of a new material of a less highly organised nature than the original tissue in which the inflammation has taken place. And here I would draw your attention to a very important point, and one which it is very desirable that we should keep strictly in our minds, and that is, that these cases of what we may call "traumatic inflammation"—that is to say, inflammation produced by a wound in which no foreign body is allowed to remain—and which inflammation is, as I hold, necessary for the healing of the wound, are very different from those inflammatory processes which are due to the admission of septic organisms. And they differ especially in this marked peculiarity—that the irritation in the tissue does not extend beyond the immediate neighbourhood of the injury. The irritant which has produced the inflammation has been momentarily applied and therefore the inflammation which results has a tendency speedily to resolve itself as soon as it has brought about those changes which are necessary for repair. This is very different from those cases where a prolonged irritant is applied to a part, then the process of inflammation is also prolonged, and when this irritant is some septic organism which has the power of multiplying in the tissues and of producing ptomaines which poison the tissues, the inflammation is not only prolonged, but has a tendency to spread and diffuse itself rapidly by continuity of tissue.

It must be admitted on all hands, I think, that in the process of union of wounds there is the formation of a new tissue which forms the bond of union and the point which we have to discuss is whether this new tissue is the result of inflammation or whether it is merely a physiological process, a condition of ordinary development or growth which is constantly taking place in the body. If we regard the subject from a clinical aspect I admit that there is considerable difficulty in making any distinction between these two conditions; for, as I have endeavoured to show, we may have all, or almost all, the signs of inflammation as the direct outcome of a physiological process and, on the other hand, we often meet with cases of wounds which heal without any of the four cardinal signs being present in any marked degree at the margins of the wound, though I believe they are always present to a certain extent, though it may be this extent is not appreciable to the ordinary observation. And it must be borne in mind that the difference between slight redness, swelling, and heat of the edges of a wound and the most intense form of these conditions is only one of degree, the latter being patent at the merest glance to the most superficial observer, whilst the former is so slight as to be scarcely distinguishable to the most careful investigator. When, however, we come to consider the question from an histological standpoint it seems to me that we cannot separate it from an inflammatory process however slight its extent and intensity may occasionally be. Let us then examine the subject from an histological point of view and et us first consider the manner in which adhesion of the edges of a wound takes place, whether this process is regarded as inflammatory or not, and this we will do in the briefest possible manner by simply stating the most salient points which have been observed so that we may clearly carry them in our minds. And in order to do this we will take an example of the simplest kind of tissue in which an incision has been made and which unites by what is called adhesive union or the "first intention" of John Hunter. For I do not propose at present to say anything about the so-called "immediate union of wounds," which was first described by Macartney, as I do not believe that such a condition exists. I shall have something to say, however, about this at a later period of my lecture.

THE PROCESS OF HEALING.

Suppose, then, we make an incision through the skin into the subcutaneous tissue beneath. What happens? First it bleeds, then the bleeding ceases, and finally union takes place. The wound first bleeds because the capillaries contained in the tissue are divided; the bleeding stops because the blood congulates in the capillaries as far as the nearest anastomosis—that is to say, to the next point of intersection of the capillary network. So that the first change is that all the cut vessels become filled with clots up to their first collateral branch, and this is undoubtedly simply a physiological process, the clotting being the result of the physiological conditions which bring about the formation of fibrin. Secondly, the capillary vessels in the neighbourhood, that is to say, beyond the point of clotting, will be noticed to be dilated. By some this would also be regarded as a physiological process and to merely arise from mechanical causes, from the increase of pressure to which the capillaries have been subjected in consequence of the coagulation which has taken place in their several extremities. About this I shall have to say a word or two in a moment; but let me first glance at the other changes which are to be observed in a wound before the process of union is effected. The third change to be noted is in the connective tissue in which the vessels ramify. This becomes infiltrated with cells and these cells multiply, so that we have the tissues at the edges of the wound infiltrated with a vast accumulation of cells which are for the most part simple nucleated cells resembling leucocytes. After a time other larger cells appear and some of these find their way to the surface of the wound and are to be seen covering it. Fourthly, the cells which cover the surface of the wound undergo a developmental process and first becoming spindle-shaped and then fibre cells are eventually converted into fibrous or scar-tissue which forms the cicatrix or bond of union. Finally and lastly, the capillary network at the margins of the wound prolongs itself in the form of loops into this new tissue and becomes continuous with similar loops on the opposite side and thus the new tissue becomes an organised structure and unites the edges of the wound together. These, very briefly, are the changes which can be observed with the microscope as taking place in the edges of a wound whereby union is effected, and the question we have to consider is whether these changes are strictly physiological and akin to those of development or growth or whether they are the result of that pathological process which we know as inflammation—whether, in fact, these cells which are the essential elements in the process of union find their way between the edges of the wound in conformity with known physiological laws and, having found their way there, undergo changes similar to those which are witnessed in the embryo, when the blastodermic cells of the ovum grow, develop, and differentiate into the various structures of the human being; or whether these changes take place as the result of a pathological process altogether different and distinguishable from normal physiological action. In discussing this point we shall have to consider four questions: 1. Is the dilatation of the blood-vessels, which we described as the second change in our process of union, simply a mechanical one and due to the increased pressure exerted on the capillaries of the part? 2. Is this vast accumulation of cells in and around the wound the simple outcome of a physiological process? 3. Are the changes which take place in the cells exactly identical with the mode of growth and development in embryonic cells? 4. And, lastly, What is the nature of the newly-formed tissue?

The first point, then, which we have to consider is whether the dilatation of the blood-vessels, which undoubtedly occurs, is simply due to mechanical causes. We have seen that when a wound is made the blood-vessels at its margins become blocked, and it is perfectly clear that the blood will have to accommodate itself to this and find another channel by the existing and patent by-paths around the blocked vessels.

The result of this is increased pressure in these parts and as a consequence distension and dilatation of the vessels. So there can be no question that in this simple mechanical explanation there is a way in which we may account for the dilatation of the blood-vessels, but unfortunately this mechanical explanation does not fully account for the subsequent changes which take place. It fully explains the first step in the process—the determination with increased motion—but it does not explain the determination with diminished motion in which the circulation becomes slower and slower until the retardation results in stasis, with consequent diapedesis. For this we must look to some other cause than a mechanical one, and hence, as it is certain that this slowing of the blood current does take place, we cannot accept the theory that the dilatation of the blood-vessels in inflammation is entirely due to a simple mechanical cause. To what then must we attribute this dilatation and this increased flow of blood? Numerous hypotheses have been advanced at different times as to the cause and it cannot be said that even at the present time any one of these hypotheses gives a really complete and absolute explanation of the phenomenon. In considering the question I would strongly emphasise and ask you to bear in mind the words of Sir John Simon who says that "a part does not inflame because it receives more blood; it receives more blood because it is inflamed." For if we do not admit this the whole argument falls to the ground. It is self-evident that the proximate cause of the dilatation must be change in the tonicity of the muscular coat of the vessels and the question we have to determine is how this change of tonicity is brought about. It at once suggests itself that this may be due to some irritation which disturbs the function of the nerves of the vessels. And this may to a certain extent be so, especially as it has been proved by direct experiment that irritation of a sensory nerve causes dilatation of the arteries in the whole area to which the nerve is distributed. Why this irritation of a nerve should produce this active, directly paralysing effect is not quite so clear, though I think it may be very fairly explained in the following way. We know that the vagus nerve possesses an inhibitory action upon the heart and that irritation of this nerve produces a diminution or obstruction in the action of this organ. We therefore assume that there is an inhibitory nervous system which arrests the contraction of muscles. And if this is true of the heart, why should it not also be true of the blood-vessels? and why should we not assume that the muscular elements of the blood-vessels, like the heart, are under the control of both the sympathetic and the cerebro-spinal system, the former of which causes the rhythmical contraction of the vessels, and the latter regulates and obstructs their contraction? If this is so it would explain the reason why irritation of the cerebro-spinal nerves would exert an inhibitory effect upon the muscular coat of the vessel and as a consequence vascular dilatation. But it is quite clear that this explanation of the cause of dilatation of the blood-vessel is not sufficient to explain the phenomenon. It is true that part of the dilatation may be due to this cause, but I am inclined to think it is only a very small part; for it is clear that if this was the cause, and the sole cause, the dilatation would not be confined to the injured area, but would embrace all those parts supplied by the nerve irritated. Moreover, experiment and clinical experience negative this view. The experiments are those of Cohnheim, who has shown that in the tongue of a frog after its nerves have been severed the process of inflammation can be excited by almost any irritant, and, indeed, that where the tongue has been severed from all its connexions, so long as the arteries and veins are allowed to remain intact an inflammation can be excited by similar causes. It is certain here that the dilatation is not dependent on any influence conveyed to the blood-vessels from the cerebro-spinal centre. Clinical experience also points in the same direction. I need only allude, in illustration, to the fact that it is a matter of every-day experience to see inflammation set up in paralysed parts, where the nerves clearly can have nothing to do with the primary condition of dilatation. We must look, therefore, to another cause to explain the dilatation which takes place in the inflamed area. I think it may be briefly stated to be due to the direct effect produced upon the vessels of the part by the injury which has caused the disturbance, or, in other words, that the irritation disturbs directly the function of the muscular coat of the arteries and veins and the living cell substance of the capillary walls. This is in strict accord with Cohnheim's so-called "alteration" theory of inflammation—namely, that the "alteration of the physiological condition of the walls of the vessels is the cause of those phenomena and processes the sum of which is designated by the term inflammation." The experiment on which Cohnheim based this proposition was by cutting off the circulation from a part for a certain length of time, say, twenty-four hours, by encircling it with a ligature, and then at the expiration of this time loosening the ligature and restoring the circulation. By this means he produced as typical and intense an inflammation as by subjecting the part to the direct action of an irritant. By thus depriving a part of blood he unquestionably altered the physiological conditions of the blood-vessels and other tissues and this changed or abnormal condition was the proximate cause of the dilatation of the blood-vessels as well as the other phenomena of the inflammation. If, then, this undoubted alteration in the walls of the blood-vessels—the part with which the blood first comes into contact in these experiments—causes them to act as if they were inflamed, may we not assume that a similar change takes place in the vessels when inflammation is set up by other causes and induces a similar result? If we accept this as true we have a strong argument in support of the view that inflammation is necessary for the repair of tissue and therefore for the union of wounds. For we have here in the vessels a deterioration of tissue, a retrograde metamorphosis, which certainly cannot be regarded as a healthy physiological action; a something which is quite different from the *afflux sanguinis*, the active congestion or determination of blood which is due entirely to nerve influence.

We pass on now to consider the second question which I set myself—namely, Is the vast accumulation of cells in and around a wound during the process of healing the simple outcome of a physiological process? In order to answer this question we have to ask ourselves another: Whence do they come? I suppose there is no one here present who would hesitate in answering that, at all events to a very considerable extent, they are emigrated leucocytes. And this is undoubtedly one source from which they are derived, though I think there is very little doubt that they are also in part derived from a second source. Into this point, however, it is foreign to my purpose at present to enter; and it is sufficient that we believe that the myriads of round cells which we see in and around a wound during the early stage of the healing process were originally derived in part from the leucocytes which have passed out of the circulation through the walls of the capillaries. We then ask ourselves another question, Why has this emigration taken place? It is a condition very different from what we observe in health. For though it cannot be denied that exudation of the plasma of the blood takes place as a physiological process and emigration of the leucocytes very probably does so, still it is a very different condition to what we see in a wounded part and we never find in healthy tissues the whole of the structure infiltrated with leucocytes to such an extent as almost, if not quite, to obscure the natural structure of the part. There is no doubt that the answer to this second question is that the emigration is due to stasis or that condition of arrested circulation which we know speedily follows the dilatation of the blood-vessels in an inflamed part. And then we ask ourselves a third and final question, What is the cause of this stasis?

Many theories have at different times been put forward to explain this phenomenon. It has been attributed to the dilatation of the blood-vessels, to changes in the corpuscles, and to changes in the tissues, especially the lining membrane of the walls of the vessels. It cannot be due to the dilatation of the walls of the vessels because we do not find a similar phenomenon attending the dilatation of vessels from other causes. Division of the sympathetic in the neck of an animal causes dilatation of all the vessels of the head and face from paralysis of the muscular coat of the blood-vessels, but there is no tendency to stasis or arrest of the circulation. Then, again, it cannot be due to changes in the corpuscles, for if we examine the mesentery of a frog under the microscope in which inflammation is slowly set up from exposure to air we may watch a leucocyte showing a tendency to stick to the wall of the vessel so long as it is contained in the inflamed area; it partially adheres, oscillates to and fro, but gradually makes progress onwards till it reaches the extreme limit of the inflamed area, when it at once loses this tendency to adhere and flows on rapidly in the normal course of the circulation. Another reason why it cannot be due to changes in the corpuscles is because if it were we must assume that not only

the corpuscles in the inflamed area are changed but all the corpuscles throughout the body, and therefore this same adhesiveness must be observable in every vessel in the body, for only one small portion of the blood was acted upon by the irritant which set up the inflammation, and the blood in the area of stasis cannot be that which was thus acted upon. Stasis must therefore be due to changes in the walls of the vessels or the tissue with which the blood comes in contact, so that the corpuscles when they pass into the injured area acquire a tendency to adhere. The lining membrane of healthy vessels differs from every other solid in the fact that the corpuscles have no tendency to adhere to them and therefore no coagulation of the blood takes place; but when the corpuscles, and especially the leucocytes, come in contact with any foreign body—that is to say, anything else except the healthy wall of the vessel—they show an immediate tendency to adhere to it, to disintegrate and set free their fibrin ferment, and coagulation is the natural result. The same thing holds good if the lining membrane becomes altered in structure or diseased. It no longer possesses the power of repelling the corpuscles but on the other hand attracts them and causes them to adhere. It acts as a foreign body. Look, for example, at many cases of thrombosis where the coagulation is due to an altered state of the vessel wall which causes the leucocytes to adhere to it and as a consequence the vessel becomes occluded with clot. Or, again, look at the natural process of cure in an aneurysm. The lining membrane of the sac is an altered tissue from the ordinary lining membrane of an artery; it is a foreign body—a something other than the wall of a healthy vessel. In consequence of this the leucocytes adhere to it; they disintegrate, they set free their fibrin ferment, and thus fibrin, the active clot of Broca, is formed on the interior of the sac. In the fact then that in the union of wounds we have the tissues in and around the wound infiltrated with cells we have another strong argument in favour of the theory that the union of wounds is an inflammatory process. This infiltration with cells is the direct outcome of stasis in the vessels and this stasis is a necessary result of their deterioration or retrograde metamorphosis which can scarcely be regarded as a physiological process.

In connexion with the third question which we set ourselves to consider, whether the changes which take place in the cells, which are now believed to be in a great measure large mobile cells formed by proliferation of the original cells of the part which have replaced the emigrated leucocytes, are exactly identical in their mode of growth and development with embryonic cells, I am bound to say that I know no difference. It seems to me that we must acknowledge that these cells of granulation tissue are exactly identical with embryonic cells and behave in the same manner, undergoing the same form of development into higher tissues. It would appear that the recognition of this fact has caused objections to be raised against designating as inflammatory the purely regenerative processes which take place in the healing of a wound. But I would contend that it in no wise invalidates my argument that the new formation of tissue which leads to the adhesion of wounds is inflammatory. My contention is that this newly formed tissue, which is by a process of development eventually to form scar tissue, or the bond of union between the severed tissues, is the result of an inflammatory process, though the subsequent steps by which it undergoes development into scar tissue may be distinctly physiological, or at all events identical with processes which take place in the blastodermic membrane of the embryo where the primary nucleated masses of protoplasm of which it is composed undergo changes of growth, multiplication, and differentiation until they become converted into complete animal cells of many different types. It is the mode of origin of the cells and not their subsequent changes which marks off the process of union of wounds as an inflammatory one.

INFLAMMATION ALWAYS PRESENT.

Leaving this point we pass on to consider the fourth and last question which I stated it was my intention to bring under your notice in elucidating the point which we have under consideration. The question is as follows: What is the nature of the newly-formed tissue which acts as a bond of union and joins the two severed surfaces together? And in the answer to this question I think we shall find one of the strongest arguments in favour of the view for which I am contending—namely, that wounds always unite by a pathological process which we term inflammation.

The elucidation of this point will require a little careful consideration. So long as tissue elements retain their vitality they possess the power of undergoing nutritive and formative changes on the application of a physical or chemical stimulus. Up to comparatively recent times the knowledge of this fact caused pathologists to regard inflammation as a condition of increased, though perhaps perverted, activity of the process of nutrition. The converse of this is, however, the fact. Lord Lister was the first to initiate the doctrine that "inflammation consists not in increased but in diminished vitality of the tissues affected." The process of inflammation, whether showing itself by enlargement, multiplication, or formation of cells, is always a sign of lower vitality and results, as Dr. Burdon Sanderson expresses it, in "tissue spoiling and not in tissue stimulation." And the more rapid the rate of reproduction the less is the stability of the newly-formed tissue, and those tissues which are the result of the inflammatory process are always more lowly organised and of a lower vitality than the original tissue of the part before the process of inflammation took place. Inflammation must be regarded therefore as a destructive process. If we admit this—and who will gainsay it?—we have an extremely strong and potent argument in favour of the fact that the scar tissue or bond of union in a wound is a product of inflammation and not a new formation the result of a physiological process.

Let us briefly consider what scar tissue is. It is composed of dense white fibrous tissue which differs from the normal tissue which it has replaced in many important particulars. And as Rindfleisch says, "Cicatricial tissue is far from being a connective tissue of ideally high quality." It is more dense than ordinary areolar tissue and contains no yellow elastic fibres. It is smooth on the surface and presents no papillæ. It is devoid of sweat glands, sebaceous glands, or hair follicles. It contains no lymph spaces or lymphatics and nerve fibres are very few in number or altogether wanting. When first formed it is vascular, but its vessels soon disappear and it becomes dry, hard, and white and of lower organisation than the natural parts. Moreover, scar tissue is exceedingly prone to diseases of degeneration. How common a thing it is to find a scar breaking down and ulcerating and how slow these ulcers are to heal and how liable to recur. And, again, how frequently we find scar tissue becoming the seat of epithelioma, constituting what was first described by Mr. Cæsar Hawkins as the "warty tumour of cicatrices." And even keloid must be regarded as a disease of degeneration, for though there is an excess of growth this growth consists of a lowly organised fibrous tissue, intermingled with cells, which are arrested in their progress of development, and degenerate in their incomplete forms. If, then, this is the character of scar tissue it can scarcely be regarded as the product of a healthy physiological process and it becomes a powerful argument of the view that union of wounds is an inflammatory and therefore a pathological process and not a physiological one.

This, then, is the evidence which I have to bring forward in favour of the view I am upholding and it only remains now for me to endeavour to reconcile this view to the doctrine of the different forms of union of wounds.

In our text-books on surgery it is customary to describe five classical ways in which wounds unite: (1) by immediate union, primary adhesion, or direct growing together of the severed surfaces; (2) by first intention; (3) by scabbing; (4) by second intention; and (5) by secondary adhesion or growing of two granulating surfaces together. To these I think we ought to add another—namely, healing by blood-clot. It will be my endeavour to show that there are only two ways in which union of wounds takes place—namely, without suppuration and with suppuration; and, moreover, that the difference between these two conditions is very slight, being one more of degree than of kind, and that they are both the result of the same morbid process going on in the part—that is, inflammation.

DETAILS OF MODES OF UNION.

Let us consider these different modes of union a little more in detail. It is the first of these that I most desire to consider because it is a mode of union in which the essential principle was laid down by Macartney, of Dublin, who first described it, that there was no inflammation. He says: "Union takes place without any intervening substance such as blood or lymph." We are told that when the surfaces of a clean-cut wound are carefully adapted and

supported they will probably be found to present no signs of inflammation appreciable to the senses and in the course of from twenty-four to forty-eight hours the wound will be so soundly united as to require no further attention, nothing being left except a linear mark which at first looks more or less red but gradually fades away and in the case of small cuts disappears altogether. This is hardly an intelligible account of what takes place. In what does the process of union consist? There must be some process by which the severed surfaces are caused to adhere together and to become united in such a way as to present no trace hereafter of where the union has taken place. And, again, what is the nature of this linear mark which at first looks red and then gradually fades away? And, finally, must we assume that there is no inflammation because there are no signs appreciable to the senses present? I confess that this theory of immediate union is beyond my comprehension and I have searched for an intelligible account of what takes place without being able to find it. Hear what another author says: "When wounds unite by immediate union no other changes than these"—namely, coagulation in the vessels up to the nearest anastomosis and dilatation of the capillaries in the neighbourhood—"take place beyond the gradual restoration of the capillary circulation through the parts that have been divided and under such somewhat rare circumstances no scar or cicatrix is left. The soft parts at first simply adhere together and subsequently become continuous." But why do they adhere? How do they become continuous? What becomes of the clots in the vessels and why do the neighbouring capillaries dilate? Another author says: "The divided blood-vessels and nerves are brought into perfect contact and reunion ensues by the opposed surfaces simply growing together." Very simple; but I confess that I should like to be told how they grow together. Does the author mean that when the parts are replaced that each minute filament of nerve and the open orifice of each capillary vessel is brought into "perfect contact" with its corresponding and severed half on the opposite side of the wound? The idea is of course absurd. It seems to me that we must acknowledge the presence of some connecting material which shall first cause the cut surfaces to stick together and through which they shall become continuous, just as much as in the case of two pieces of wood which we cannot make stick together without the intervention of some adhesive material.

I for one, therefore, must discard the doctrine of the first mode of union of wounds as untenable. I explain those cases in which it is said to occur—and I must confess that I have never been so fortunate as to observe the process in my own experience—as cases where the inflammatory process is reduced to a minimum and where, therefore, the adhesive material is correspondingly small. Direct experiment negatives the proposition. If a wound, however small and however carefully adapted immediately after its infliction, be made, it will be found upon killing the animal and making sections of the injured part that there is a greater or less amount of connecting substance between the edges of the wound. Even if a very small incision be made through the cornea of a rabbit with the sharpest knife and be prevented from gaping by at once closing the eye the resulting cicatrix will be invisible to the naked eye, but nevertheless the intermediary substance may be demonstrated on microscopic examination. It seems clear to me therefore that we must exclude this fancied method from our category of modes of union of wounds and arrive at the conclusion that where union takes place very rapidly and without the ordinary signs of inflammation being appreciable to the senses that the difference is merely due to degree and that the same changes take place here as in the so-called union by the first intention, though to a less extent. For who shall say how much hyperæmia, how much exudation, and what amount of new formation of tissue is necessary to agglutinate and unite the edges of a wound together?

We proceed, secondly, to allude to the second mode of union of wounds—viz., union by first intention or by, as I believe, adhesive inflammation. I shall not say more about this mode of union than to mention that this would correspond to my suggested first division, that is to say, union without suppuration. I have already discussed this process very fully and the changes which take place in the part up to the conditions of complete union and which changes are admitted by all whether they are believed to be due to an inflammatory process or not. We pass on therefore to union by scabbing. This I believe to be merely a modification of the process of union by first intention and not to be worthy of being placed in a distinct class by itself. When a wound heals by scabbing the separative material which is poured out undergoes similar changes to those which take place in the same material when the wound heals by first intention, the scab merely forming a protective film over the wound and preventing decomposition or putrefaction. Union by blood-clot is another mode of union which can only occur in an aseptic wound and has only recently been described. It is merely another modification of union by first intention or by adhesive inflammation when the edges of the wound are not in contact but are separated by blood-clot which acts as a mould or framework into which the leucocytes and the plasma cells, the result of the inflammatory process, penetrate and where identically the same changes go on as in those cases where the edges of the wound are in close contact and where there is nothing between them but inflammatory exudation. It is obvious that all these modes of union are merely modifications of one process and are identical as far as regards the changes which take place. They may therefore, I think, with propriety be classed together as modes of union of wounds without suppuration.

It remains for us now finally to consider the two other processes or modes of union of wounds—namely, union by second intention and union by secondary adhesion, or, as it is sometimes called, "third intention"—two modes of union which I would venture to class together in one group as cases of union with suppuration. With regard to this mode of union it will be seen, I think, that it is merely a modification of the mode of union we have already described; that in both the essential features are identical and that the difference in the two is one rather of degree than of kind. The difference in the two would appear to be due to some circumstance which produces a prolonged irritation and therefore the resulting inflammation is prolonged and the amount of inflammatory exudation is increased. If we examine the changes which take place in this mode of union we find that we have the same initial changes, the same blocking of the severed vessels, the same hyperæmia around and the subsequent stasis, and the same exudation of what Hunter termed "plastic lymph." But instead of this exudation being slight in amount and speedily ceasing it goes on and on until the surface of the wound becomes covered with a considerable layer too thick to be nourished by the vessels in the underlying tissues. From malnutrition, therefore, the cells in the superficial layers undergo degeneration and are converted into pus cells and thus suppuration takes place. At the same time the deeper layers become vascular and converted into granulations which undergo cicatrisation and so the wound is healed. There can be no question, I think, that the cause of the prolonged irritation is the presence of septic micro-organisms in the wound. Time will not permit me to describe the process in detail, but sufficient has been said for my purpose which is to point out the close analogy between the process of union by the first intention and union by second intention. In both there is inflammation; in both this is attended with exudation, though varying in amount; and in both this exuded material forms the bond of union. In union by secondary adhesion or "third" intention we have the same exudation of inflammatory material acting as the bond of union. We have inflammation, exudation, and the conversion of the exudation into granulations. If these granulations are now brought in contact they coalesce together, just in the same way as the exudation does in union by the first intention. The vessels grow through this coalesced material from side to side of the wound, the cells of which it is composed undergo developmental processes and are converted into scar tissue and the union is complete.

Such then, Mr. President and Gentlemen, are briefly my views with regard to this important question of inflammation in connexion with the union of wounds. The whole subject hinges on the one point of what we mean by inflammation. If we agree with Hueter and Kocher that no injury alone is competent to produce inflammation without the intervention of micro-organisms, then my whole argument falls to the ground. But if we believe, as I do believe, that inflammation may be induced without the concurrence of organisms—an inflammation, I admit, different from that excited by these bodies, for it neither tends to spread to contiguous parts beyond the area of injury nor to infect distant parts through

the blood stream or otherwise—then I say I have brought forward conclusive evidence to prove that the union of wounds is an inflammatory process. At least, if it is not, I know not what it is.

The Purvis Oration

ON

SOME PRACTICAL POINTS IN THE TREATMENT OF THE CHRONIC FORMS OF HEART DISEASE DUE TO RHEUMATISM.

Delivered before the West Kent Medico-Chirurgical Society on Dec. 2nd, 1898,

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MR. PRESIDENT AND GENTLEMEN,—Permit me to offer you my heartfelt thanks for the honour you have done me by inviting me to deliver the Purvis Oration. The invitation was as gratefully accepted as it was unexpectedly received. I have listened to many communications at the various London medical societies. Many such essays had been produced with much labour and reflected the earnest purpose of the writers, but yet only a small percentage of them has contributed definitely to the history of medicine and often the interest evoked has been fitful and unsustained. And yet how highly one ought to esteem these often self-denying labours. In a few instances one such communication has marked an epoch in medicine; in cases more numerous the student of a certain subject has found in the old records data of priceless value inciting him to the prosecution of new research. The value of the routine work of this society and of every such society in our midst cannot be doubted. A different set of conditions, however, obtains when one who has lived and worked among his brethren is asked to search among the stores of his own experience and present the conclusions of his thoughts to willing hearers. If I may be forgiven I will take a parallel from the experiences of my childhood. The boy who came into the family circle with the announcement, "I have a story to tell," was not always well listened to, while, "Uncle, tell us a story," was the signal for the assembling of hearers and the arrangement of serried ranks of chairs. I am grateful that you have asked me to tell a story.

THE SCOPE OF THE ORATION.

I will now come close to my subject. I have thought that it might serve some useful purpose if I gave you my own views as to the treatment of heart disease. The term "heart disease," however, is too wide in its significance. I had to narrow it down. I considered that on the whole it would be best to avoid definitions and to assume the hypothetical case of a patient, male or female, under the age of thirty-five years, coming to consult us for an indisposition which we have found by physical and other means of diagnosis to be caused by some structural cardiac disease. The limit of age, thirty-five years, makes the probability strong (in the highest degree) that the disease is of rheumatic origin. I say this dogmatically in the first instance. The conditions of disease are such that after the age of thirty-five years the factors of heart diseases are multiform and rheumatism plays but a small part in the causation. The "coming to consult us" is intended to imply that the patient is able to walk about. The disease is, or seems to be, not acute, but chronic.

I must now, at the risk of being thought prolix, explain what I mean by the term "practical." It has been said again and again, and lamented over, that the progress of therapeutics has not been commensurate with the advances in biology and pathology. I demur to this conclusion. It is only in the nature of things that the rate of progress should be slower in the one case than in the other. It is essential to us as scientific men that we should know what is the matter before we apply the remedies. We are all aware of the great difficulties which there are in our understanding and duly estimating the intricate processes of disease, but it is incumbent upon us to do all that we can to penetrate the gloom and to realise as in a picture before us the conditions, static and dynamic, not only of the portion of the organism diseased but of the organism in its entirety. We are thankful for the light afforded us by all methods of physical investigation. It is our duty to obtain knowledge as precisely as possible. Any rapid guess-work savours of charlatanry. The meaning of the word "practical" shifts with the epoch. In the time of Paracelsus it might have been considered practical to assert that a fit of the gout was due to a subsidiary demoniac messenger hurriedly sent to the great toe from the arch demon—the Archæus—within the body. In my own time, when I was a dresser, it was considered practical to amputate a limb without any of the antiseptic precautions now in vogue and to dress the wounds on principles which certainly were not Listerian. Very shortly before my student days it was practical (and inevitable) to do all surgical operations without anæsthetics. In the cases of amputations for diseases of bones and joints before the epoch of anæsthetics one patient in every three died; in the early days of anæsthesia (1854 to 1857) one in five died. To what extent this mortality is further reduced nowadays surgeons know better than I do, but at any rate it is receding to an almost insignificant figure.

ENDOCARDITIS IN THE FŒTUS AND IN EARLY CHILDHOOD.

I have said enough to indicate that by practical points in the treatment of chronic disease of the heart I mean practical therapeutics based upon as clear a knowledge as we can obtain of the morbid conditions. I now return to a consideration of the patient hypothetically before us who has a disease of the heart of, as I have asserted, rheumatic origin. I have already assumed such patient to be under the age of thirty-five years. But what is the limit of youthfulness? I must answer that disease of the heart of rheumatic form may be manifested during the very earliest years and even in intra-uterine life. In proof of this I feel that it will be of interest if I draw attention to a case in which disease of the heart was discovered in the fœtus during life and verified after death. A healthy girl, aged seventeen years, was admitted into the Hospital of La Pitié, Paris, in January, 1880. She was in the last month of pregnancy and came to the hospital only for her accouchement. The case was most completely observed by Professor Peter who found the uterine signs quite normal and there were evidences of a fœtus endowed with much muscular activity. Auscultation demonstrated the sounds of the fœtal heart, but instead of these being of the usual regular "tic-tac" characters there existed a loud, harsh murmur followed by a short, sharp noise just like the normal second sound. The rate of the fœtal heart-beats was 130 per minute. Parturition occurred in a perfectly regular manner and a male infant was born—pale, apparently ex-sanguine, and in a moribund state. The death of the infant soon followed. At the post-mortem examination the heart was found to be enormously dilated and hypertrophied in the right chambers, while the left auricle and ventricle presented normal characters. The tricuspid valve showed all the signs of endocarditis, vegetative and sclerous. There were numerous vegetations on the free border, and the tendinous cords, thickened and shortened, caused such retraction of the firm fibrous curtains of the valve toward the ventricular wall that tricuspid insufficiency was manifested in the most marked degree. The reporter of the case considered that the hypertrophy of the right chambers of the heart must have been rapidly produced for it was evident that the endocarditis had developed subsequently to the closure of the fœtal openings between the right and left chambers of the heart.[1]

I have quoted this case first to draw the attention of those who are in general practice or in obstetric practice in case their experience may tell of corroborative cases; secondly, to show that endocarditis with subsequent changes in the heart muscle and heart cavities, morbid phenomena identical with those of heart disease of the rheumatic form, may occur in the fœtus whilst the mother may be quite healthy and show no sign of rheumatism whatever.

Another case has been communicated to me by my friend

1 Constantin Paul: Traité des Maladies du Cœur, Paris, 1887, p. 743.

Dr. J. O. Tunstall of Sutton Coldfield. In an infant who died very shortly after birth all the valves were found to be thickened and presenting numerous vegetations near their free borders. The valves of the right side were more affected than those of the left. There was no history of rheumatic fever or tendency thereto on the part of the mother. Dr. Dreschfeld, writing in Professor Clifford Allbutt's "System of Medicine," says: "Fœtal endocarditis is by no means a rare affection." Dr. Rauchfuss of St. Petersburg concludes that where there is no congenital malformation of the heart the valvular apparatus of the left chambers in the case of endocarditis in the fœtus is as frequently affected as that of the right. According to my own observations endocarditis involving the tricuspid is more frequent in young children than in later life. I found vegetations on the tricuspid valves in six cases out of thirty-two post-mortem examinations in all forms of valvular disease in children. The involvement of the tricuspid in the ordinary rheumatic form of endocarditis is not so frequently demonstrated in cases of adults. The explanation given by Dr. Byrom Bramwell founded on his own personal observations is probably correct—that the tricuspid is involved in acute endocarditis more frequently than is generally supposed, but the disease often passes away without the manifestation of such fibrous thickenings and retraction of curtains, cords, and columns as are frequently observed in the case of the mitral valve and the mitral orifice.

In the cases of fœtal endocarditis we have to form our judgment as to the rheumatic nature of the heart disease from the evidence of morbid anatomy alone. According to my own observations the morbid changes in the valves and in the cords and columns, as well as the consecutive alterations in the walls of the heart, are identical with those known to be in direct association with rheumatism. In the period of early childhood the clinical associations with rheumatism are more manifest, though the articular inflammation may be very slight and in a very considerable number of cases no signs or symptoms of implication of the joints exist. But in childhood the whole heart is profoundly affected by the rheumatic process. I said in my "Lectures on Diseases of the Heart in Childhood," published in the *Medical Times and Gazette* nearly twenty years ago: "In the child heart disease may be the forerunner of an attack of acute rheumatism, may occur at any period of the manifestation of articular phenomena, may arise when these are scarcely appreciable, and may become evident at any period after the subsidence of rheumatism. ..... As with the joint symptoms so with the pyrexia, the relation with the development of heart disease is by no means intimate. Wunderlich remarks that pericarditis and endocarditis can run their course without any elevation of temperature. They sometimes occur without elevating the temperature even a tenth of a degree. The conclusions are identical with my own."[2] Subsequent experience has abundantly confirmed these observations. In childhood the whole heart—pericardium, myocardium, and endocardium—is involved in the morbid process. The late Dr. Sturges termed the affection *carditis*, to express in a word this involvement, and he added: "Strictly speaking, carditis—inflammation, that is to say, both exocardial and endocardial — is exclusively rheumatic."[3] When we come to consider the conditions of heart disease in adolescence and in adult life, in its earlier and later periods, the evidence of morbid anatomy is to show that the changes are more widely spread than would seem at first sight. I said in my Lettsomian Lectures delivered in 1883 that the structures in the neighbourhood of an inflamed valve in rheumatic endocarditis—the fibrous tissues and the interstices of the muscular fibrillæ—were found on microscopic examination to be infiltrated with inflammatory exudation cells. Dr. Sturges[4] gave convincing proofs of the widely-spread infiltration of the heart muscle and similar conclusions have been enforced by Dr. Byrom Bramwell and other observers. More recently in papers read before the Royal Medical and Chirurgical Society on June 28th, 1898, Dr. D. B. Lees and Dr. F. J. Poynton have drawn attention to acute dilatation of the heart in rheumatic fever and to rheumatic dilatation of the heart in the rheumatism and chorea of childhood. Dr. Lees concluded from precise observation that an acute dilatation of the heart was a common occurrence in a rheumatic attack even when arthritis and pyrexia were slight and when there was neither distinct pericarditis nor endocarditis. Or an acute dilatation of the heart might be superadded to pericarditis and endocarditis. In the rheumatic affections of children the enlargement of the heart was demonstrated in a large number of cases and this enlargement receded as improvement set in. The careful and precise observations of Dr. Lees and Dr. Poynton confirm my own conclusions. I wrote in *International Clinics*, vol i., in 1894: "I am convinced that the rapid increases of dulness over the heart in rheumatism are not at all due to pericardial inflammation and the effusion of fluid; the whole heart may become swollen and dilated—swollen with the products of inflammatory exudation, dilated because of the enfeeblement of the muscle of its right and left chambers. In some cases this condition of swollen heart disappears without any of the friction signs of pericarditis being manifested; in fact, the heart and its serous membranes may pass through changes like those occurring in a joint inflamed through rheumatism. These variations in the bulk of the heart may be observed in some cases to be considerable from day to day and there may be repeated enlargements at intervals of a few days just as there may be repeated swellings in the joints." It must be borne in mind, however, that the enlargements of the heart bear no relation in time or in degree to the articular symptoms.

THE PROS AND CONS OF DIGITALIS.

Let us, then, revert to our patient who presents himself to us after convalescence from an attack of rheumatism. We find that there is something wrong with the heart—either morbid enlargement without other signs or murmurs indicative of incompetence of the mitral or aortic valves. Let us realise as the first practical point that even though weeks and months may have elapsed since the obvious symptoms of rheumatism it is most probable that the rheumatic disease in and about the heart is not absolutely quiescent. Slowly and without betrayal by symptoms the changes go on in the endocardium and the fibrous structures of the valve and its neighbourhood. If things go well a mere thickening results, the valve curtains remaining competent; if adversely there is contraction of the firm and thick tissue, degenerative changes supervene, and the valve becomes incompetent. But this may not be all; there may be waves of retrogression alternating with improvement, successive storms of disease with enlargements and shrinkings of the heart.

The first practical point, therefore, I would urge in regard to treatment is that we should realise that the problem is not the simply statical one of restoring a lack of power in the heart muscle, but a dynamical one of overcoming the influences of various factors and varying phases of disease. Take, first, the medicinal treatment. There are signs of some cardiac failure; shall we prescribe digitalis in some form? Consider the *pros* and *cons*. Many of us have had most favourable experiences of the usefulness of the drug. Suppose that the patient who has come to us has given evidence of the difficulty of breathing of effort, of some pretibial pitting or more marked signs of œdema of the lower extremities have appeared, and possibly of basic œdema of the lungs. Digitalis is given in the form of tincture, infusion, or powder and after a few days, perhaps even though complete rest has not been enforced, there is vast improvement—the output from the kidneys has been increased, the diuresis has cleared away the dropsy, and after some days of further treatment the adverse symptoms vanish.

But the experience of a second case may be very different. Administration of the drug fairly in, say, increasing doses during five or six days is followed by no sign of amendment. Perhaps there is evidence of intolerance in vomiting, of diarrhœa, of signs of faintness, of irregularity of the rhythm of the heart; or that, without any such signs, the drug disagrees; it is simply inert. The pulse is not rendered slow, the tone of the artery does not improve, diuresis does not result, and the dropsy persists or increases. How are we to interpret the facts? I think they may be briefly elucidated thus. If there be no rheumatic febrile disturbance and if the heart tissues are not undergoing active inflammatory changes digitalis properly administered acts well. If there be waves of active inflammatory action, circumstances not always to be readily discovered, digitalis fails. Such has been my experience. In a paper

[2] Medical Times and Gazette, Sept. 20th, 1879, p. 335.
[3] Lettsomian Lectures. London: Churchill, 1886, p. 6.
[4] O. Sturges: Lumleian Lectures on Heart Inflammation in Children, THE LANCET, March 10th, 1894.

founded on precise investigation by Dr. Lauder Brunton and Dr. Theodore Cash the authors thus express themselves: "The administration of digitalis or of drugs which act like it to patients in a febrile condition is likely to have much less effect on the pulse than at the normal temperature, and if the temperature be very high they may have no effect at all while this persists. When the temperature begins to fall the pulse naturally becomes slower and this slowness is increased if digitalis has been given at the height of the fever. It is therefore evident that digitalis and its congeners if they are given at all when the temperature is high should be given with great care, for otherwise the medical man may be induced by the apparent inaction of the remedy to push its administration too far during the fever, with the consequence of producing too great depression of the pulse during defervescence." I would supplement this by expressing my own opinion that not only during periods of rheumatic pyrexia but also when the heart structures are actively infiltrated during rheumatism, though it may be in the apparently chronic stages, digitalis is often inert or harmful.

REST AND TOPICAL APPLICATIONS: BEWARE OF MUSCULAR EXERCISES.

If two—or perhaps three—days have passed without improvement the drug should be omitted and the patient advised to take perfect rest in bed. Of course the withholding of the digitalis should be earlier if signs of intolerance arise. Now comes the question of counter-irritations or topical applications to the præcordia. Small blisters may be applied after the manner recommended by Dr. Caton[5] of Liverpool—one of the size of half-a-crown near the heart's apex and when the consequent irritation is subsiding a second blister of similar size close to it, and others following. Or these small blisters may be placed over the intercostal spaces. In France the thermo-cautery (*pointes de feu*) is more frequently employed. Though these methods may tend to relieve subjective symptoms I have not been convinced that they have had any decided therapeutic effect. I think that there has been much more decided evidence of amendment from the topical application of the ice-bag as recommended in pericarditis by Dr. D. B. Lees. An ice-bag suspended from a cradle should rest lightly over the heart-region, a thin layer of flannel intervening. The ice-bag may be applied for periods of half an hour and removed for like periods. Usually the patient is made comfortable by these means and the heart-tumult is allayed. A temporary dilatation of the heart may under such treatment subside in two or three days. A small hypodermic injection of morphia acetate or morphia hydrochlorate, from $\frac{1}{16}$ gr. to $\frac{1}{4}$ gr., is a great aid to the calming and comforting of the patient. I can thoroughly endorse Dr. Clifford Allbutt's commendation of this therapeutic plan which he himself introduced in heart cases. "By the mouth opium is behind other sedatives in value, its use being attended by grave drawbacks, but hypodermically in doses beginning at one-tenth of a grain and gradually ascending to a quarter of a grain if necessary it is a precious means of relief. The physicians who still protest against its use are unfamiliar with the practice. There is no remedy which calls forth so warm a tribute from the patient himself."[6] From these considerations the second practical point I would insist upon is that any sign of rheumatic storm in the heart—a state of things occurring in an apparently chronic phase and obscurely indicated by symptoms—should be treated by placing the patient at rest in bed.

I think it my duty to utter a warning note against the indiscriminate use by the non-medical public of methods of muscular exercise. In many cases of organic heart disease in their truly chronic stages these methods of increasing the physiological activity of the heart-muscle are of very high value, but there is much danger in the case of the rheumatic heart even though the disease may seem to be chronic. If there be the rheumatically swollen heart—a condition of which the patient himself may be unconscious—the use of muscular exercises should be prohibited. To advise these would be equivalent to a direction to a patient with inflamed joints to run. After a period of such absolute rest exercise should be commenced gradually, for too long inactivity is of course harmful, but the question of the duration of the period of complete repose should be left to the medical adviser.

Can medicines aid the absorption of the effusions in and about the heart in the seemingly chronic stages of rheumatism? I think it is generally agreed now that salicin and the salicylates have no directly favourable influence. Indirectly ministering as they undoubtedly do to comfort and well-being in the acute stages and when the joints are painful they are inert as regards any heart inflammation. I have some lingering affection for the old alkaline plan of treatment in the more chronic stages. I prescribe alkalies with no idea of neutralising any morbific acid, but simply because I think they soften membranes, increase osmosis, and thus facilitate the work of the lymphatics. Another plan of treatment which I believe to be of great value is the administration of small doses, $\frac{1}{4}$ gr. three times a day for periods of three or four days together, of calomel. In many cases I have seen what has seemed to me an extraordinary improvement under such plan of treatment.

After the systematic use of the ice-bag has been omitted it seems to be useful to apply iodine in some form over the integument of the præcordia. The painting the surface with liniment or tincture of iodine is a well-known procedure. The method which I adopt of inunction of an ointment of iodide of ammonium is, I think, much to be preferred. A drachm of iodide of ammonium is to be intimately mixed with an ounce of benzoated lard. This ointment is rubbed into the skin over the heart region by means of a piece of flannel or a pledget of cottonwool for two or three minutes night and morning. After the rubbing a piece of cottonwool, flannel, or light tissue is to be kept over the surface. This ointment does not stain the skin like the iodine preparations and it causes little or no irritation though it readily permeates. I think it much to be preferred to our old friend the belladonna plaster and certainly to the sticky, messy, dirty, perforated abominations which some of our patients delight to disfigure themselves with. Moreover, there is no interference with the daily ablutions or affusions with sea-water which are so generally beneficial.

SEPTIC ENDOCARDITIS.

Supposing that our patient with rheumatic antecedents, with the legacy of an old valvular affection which seems to be chronic, fails to respond to the treatment thus briefly sketched out and presents either signs of sinking with gradual failure or occasional crises of dangerous significance, what shall we infer and what shall we do? It is possible that an endocarditis of infective (septic) form has been set up in the areas of the old disease, for it is well known that infective endocarditis especially attacks the portions of endocardium already diseased. In the great majority of cases the advent and course of this almost invariably fatal affection are marked by signs which are acute and not chronic. There are sweatings and rigors with high risings and low fallings of the temperature figured on the chart by extremely acute peaks, and signs of embolism in spleen, kidney, cerebral arteries, arteries of the limbs or of the skin are noticed. Acute signs, however, are not invariable in septic endocarditis. I have observed and recorded cases in which the temperature has been for the most part subnormal, the maximum scarcely ever passing 101° F. and never showing any high peaks. The condition of the patient, however, is one of extreme debility not explained by the physical signs and the pulse is very feeble or dicrotic. I do not intend to enter upon any question of treatment when such a grave condition as this is diagnosed. The disease is almost invariably fatal and perhaps anything I could say might fairly be put down as not practical, and happily these very grave conditions are rare. A case may assume an aspect of extreme danger threatening death from other causes than the complication of infective endocarditis, and it is because I think that therapeutics may be an agency to avert the fatal tendency I shall quote an instance in point. A young American, aged fifteen years, had a severe attack of rheumatic fever. He recovered sufficiently to take a tour in Norway, but five months after the first attack he suffered from rheumatic fever of great severity a second time. Treatment by the salicylates was followed by improvement but there was a relapse after a fortnight. The heart became greatly enlarged, the systoles irregular and ineffectual, and the murmurs first of mitral regurgitation and afterwards of aortic regurgitation were manifested. With great care the

[5] R. Caton: Treatment of Acute Rheumatic Endocarditis. Vide THE LANCET, August 17th, 1895, p. 399.

[6] A System of Medicine by many Writers. Edited by Professor Clifford Allbutt. London, 1898. Vol. v., pp. 885 and 964. See also paper on the Use of Morphia in Cardiac Disease, by F. S. Toogood. THE LANCET, Nov. 26th, 1898, p. 1393.

patient was brought from Bergen in charge of his physician to London. For many weeks the condition was one of extreme gravity. I observed the case on many occasions. There were successive enlargements of the heart. On many occasions it was noted that the enlargement was followed by recession almost to the normal in a brief period; on one occasion the area of dulness receded from a line considerably to the right of the sternum on the right side and a finger's breadth outside the nipple on the left to the mid-sternal line and a line just within the nipple in the space of twenty-four hours. Then there was for a time considerable improvement and for about five weeks comparative calm, but again the grave signs returned and on one occasion I was called to the patient when death seemed imminent; the area of the heart was much enlarged, the heart-beats were very feeble, the pulse was small and never under 100, the face was pallid, the breathing was short and hurried, and there was orthopnœa but no dropsy. I then determined to try in this acute case a plan which had seemed to me to be of much usefulness in some chronic cases—the continuous galvanic current in the course of the vagus. There was a temporary improvement and we continued the galvanism, administering the current for six minutes three times a day, the current being from eight bichromate cells (three or four milliampères). One electrode (the anode) well moistened with warm saline water was kept pressed over the nape of the neck, and the other (the cathode) was applied in the groove outside the larynx and trachea for six minutes on the right and left sides of the neck alternately. The pulse-rate progressively diminished to 88, 84, and 76 with few variations. The course of treatment was not interrupted for some months, but there was soon sufficient recovery to permit of the patient returning to America. I have seen him here since (in the summer of this year), a hearty, strong, well-developed young man. He has now no cardiac symptoms, though there is the warning note of the murmur of aortic regurgitation.

SPECIAL TREATMENT OF NERVOUS SYMPTOMS.

The third practical point which I would venture to suggest, therefore, is that special treatment of the nervous system in rheumatic diseases of the heart, even those which seem to be chronic is in many cases of very high importance. Of course I have hesitated before concluding that the galvanic current was directly of benefit by influencing the vagus itself. I had, however, observed many cases in which such treatment had given good evidence of success in the treatment of the rapid heart and in the various forms of Graves's disease. Cases in point are detailed in my oration on the Rapid Heart at the Medical Society of London and elsewhere. From observation since of a long series of cases of Graves's disease which have progressed to recovery in a much briefer time than was the case under my former experiences I cannot doubt that galvanism (the continuous not the interrupted current) has a directly favourable effect. I think there is good reason to believe that the involvement of the nervous elements which are the agencies of the cardiac reflexes as well as regulators of the trophic conditions of the heart is to be regarded as a very important consideration for diagnosis and treatment in rheumatic inflammations and dilatations of the myocardium. I am at a loss to explain why one case of pericarditis, of carditis, or of general temporary enlargement of the heart differs so widely in its symptoms from another without assuming that the involvement of the nerve elements plays an important part in the pathogeny. I have seen, as others have, a case in which the physical signs of pericarditis have been fully manifested and yet there has been no dyspnœa and scarcely any subjective discomfort; while in another case the face denotes anguish, the breathing is rapid and gasping, the suffering is intense, and the signs all show that the patient is at the point of death. Considering the marked and agonising dyspnœa of some cases of acute pericarditis Dr. D. B. Lees suggested the questions, "Is there a dextro-cardiac respiratory centre?" and as a consequence, "Is there a dextro-cardiac respiratory reflex?" When there is no disease in the lungs and little or no defect in the aeration of the blood how shall we explain the very obvious dyspnœa unless we conclude that there is an involvement of the nervous mechanism? The late Dr. Sturges pointed out in his Lumleian Lectures that in the cases mentioned it might be contended that there was not pericarditis alone but carditis with the result that the whole substance of the heart was so weakened that the symptoms in question might be explained by the muscle failure. "But," he added, "the extremity of the dyspnœa would seem better explained by Dr. Lees's view—viz., that there is an automatic reflex from the right ventricle to the respiratory centre, such reflex being called into action by the acute failure of the right ventricle resulting from the inflammatory disease. I consider the observations of Dr. Lees and the late Dr. Sturges of very high importance. It appears to me proved by a strong array of evidence that dilatation of the heart can occur as the direct result of disease of the nervous system. I have observed it when there have been signs of neuritis of the vagus. In the cases in which the heart becomes dilated in the course of Graves's disease the dilatation is probably due to nerve disturbance. In palpitations and the rapid heart it may be concluded that disorder of the vagus is the immediate cause of the symptoms. In many cases of rheumatic heart disease nervous disturbances of the heart become epiphenomena. So it can scarcely be doubted that a morbid irritation conveyed to the vagus centre whereby the control power and the other endowments of the nerve are weakened is in many cases a very important contributory factor to produce the ensemble of symptoms. It seems to me, therefore, that an attempt to influence the vagus by the continuous galvanic current is a very reasonable procedure. Moreover, it is one very easy to accomplish. It is, of course, best that the method should be put in train by an electro-therapeutic expert, but this is by no means essential. The practitioner in attendance can arrange every detail and a nurse or the patient can soon be trusted to do all that is necessary, for the regular employment of the method should be continued for many weeks or even months. I by no means wish it to be understood that this plan of using the galvanic current for increasing the tone of the pneumogastric nerve is the only plan to be adopted for favourably influencing the nervous system in these cases. Moral agencies—the inspiration of hope, the avoidance of depressing emotions, and the inculcation of cheerfulness—are of high value. And when muscular movements are permitted and tentative training has taken place changes of scene and climate and the use of baths and systematic exercises are potent agencies for good. I have said elsewhere[7] that allowance must be made for many fallacies when the estimation of the value of treatment by baths and exercises is attempted. I have given in this communication to-night my reason for believing that enlargements of the heart may occur and recede in a way which may be independent of treatment and I have cautioned against the danger of pursuing any plan of muscular exercises when rest is of paramount importance. Nevertheless, when all these logical deductions are made, I cannot but be convinced that in many cases systematic baths and exercises and the careful following out of a plan of treatment such as that of Dr. Blanc of Aix-les-Bains or that of Dr. Schott of Nauheim are of great therapeutic value. I feel it only right to state my opinion that there is not infrequently manifested nowadays an influence which works much for evil in disturbing the rational treatment of chronic heart disease. It is the influence of the irresponsible third person. I will explain what I mean in the forms of hypothesis and parable. A patient has experienced an attack of rheumatism with heart involvement and under the conscientious care of his medical attendant has entered into convalescence. He or she meets the irresponsible third person who says: "How very ill you are; have you tried the barium and gold treatment?" "No." "Then your doctor cannot know anything about your case. You must go to my doctor who knows all about the barium and gold treatment." Or it may be, "Has your doctor ordered you to Paradis-les-Bains or Weissnicht-wo? Oh! you must go to a doctor who will be sure to order you to go to Paradis-les-Bains or Weissnicht-wo." I am sure that those phenomena of interference are not merely visions of the mind but are distinct dangers to good progress in therapeutics. The lay public are apt to be captivated by fashion in matters medical. They hear of a remedy or a given plan of treatment and their enthusiasm gets the better of their discretion. Their knowledge is and must be superficial. They reason from the supposed remedy to the disease, not as the conscientious medical man does—from the disease to the remedy. It is the medical man's duty to keep himself abreast of therapeutic science. He has already in all probability duly

[7] THE LANCET, March 26th, 1898.

estimated the prospective value of the means of treatment suggested by the irresponsible third person. If he has not suggested them it is because he thinks them unsuitable to the given case. To the irresponsible third person every case presenting symptoms of heart disturbance is a case of heart disease to be treated by some blatant method for the cure of heart disease. The intricacies of morbid processes involving the heart are of course unknown to the irresponsible third person. Even in the case of the rheumatic heart which I have attempted to sketch out to-night there is much that is intricate and perplexing and the conditions for treatment are multiform. In other cases in which not only the rheumatic changes but the influences of diseased vessels, of degenerations, of the diseases of maturity and more advanced age are to be considered the conditions are more complex still. A disturbance of the well merited confidence between patient and medical attendant works banefully for the former and very often the consultant who has thus been patronised by the irresponsible third person feels himself in an undesirable position, for the facts are withheld from him and the previous history of the patient as offered to him is vague or garbled.

Let me conclude by saying that it is the duty of any practitioner who observes a case of rheumatic heart disease, however chronic, to guard his patient against the subtle future dangers of his malady. It is incumbent on him to make himself acquainted with all the therapeutic means which the present state of science indicates. I think it was Sydenham who said to a lady patient—"Madam, you are entitled to my brains—to all my brains." The medical man must employ such means as are sanctioned by practical experience according to his own discretion without being led away by quasi-scientific will-o-the-wisps. The path is not always easy to find and light from many sources is to be sought for, but the rule is a good one: "Turn to the right and keep straight on."

FOUR CASES OF INSANITY AFTER INJURY TO THE HEAD, WITH OBSERVATIONS RELATIVE THERETO.

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THE value of statistics as to the frequency with which insanity follows upon injuries to the head is much impaired by the consideration that cases of injury to the head are mostly lost sight of after surgical treatment has ceased. Unless the mental disorder follows immediately upon the blow it may fail to be recorded. But cause and effect can in this instance be separated by a wide interval of time. With due regard to this limitation in value of statistics in the particular case in point reference may be made to the figures obtained from a German official report upon the war in 1870-71,[1] which are still probably the most instructive available, being based upon so great a material. Briefly, mental disturbance (insanity) occurred in 0·15 per cent. of the cases of head injury. A particularly instructive series of figures has of late been published by Stolper,[2] the patients being healthy men employed upon a large works, whose personal circumstances were to some extent known to the officials, whose injuries were sustained and treated at the works and whose subsequent history was known to an unusual degree. Out of 981 cases of head injury amongst these workmen 12 (or 1·22 per cent.) presented symptoms of mental disorder which could be attributed to the injury. The same writer has collected data upon the subject under consideration from various authors, from which some estimate may be made as to the percentage of cases of insanity in which the malady is referable to injury to the head. The sum total of the cases of insanity dealt with by the various writers is 18,606, and an injury to the head is set down as the cause in 480, or 2½ per cent., of these. The statement will no doubt be generally endorsed that cases of mental disorder arising in consequence of head injury in adults with no predisposition, as far as inquiry can ascertain, to such disorder are rare. I desire briefly to record 4 cases of insanity following upon blows on the head which were admitted to the Joint Counties Asylum, in 3 of which the personal and family history were negative as regards mental aberration and the disorders which are frequently associated therewith.

CASE 1.—The patient was a man, aged twenty-nine years. There was no family or personal history of insanity or allied disorders. No congenital mental deficiency was observed. He was temperate and quite well and working up to the date of the accident. Six weeks before admission he received a kick from a horse on the left mastoid process which rendered him unconscious. There were symptoms of severe concussion and bleeding from the left ear. He came round gradually, but a general dulling of faculties remained. Gradually symptoms of mental aberration became more pronounced; there were delusions of suspicion and then violence was exhibited. He became very restless, entirely "lost" and incoherent and unable to understand what was said to him. Ultimately he was quite unmanageable and was transferred to the asylum. Before this complete paralysis of the left facial nerve was noted by his medical attendant. On admission (August 26th, 1892) the patient was noted to be entirely incoherent with loss of memory and inability to orientate himself; he resisted everything done for him, was most restless, and unable to attend to his personal needs. He took no notice of remarks addressed to him but kept up a meaningless jargon—"acute confusional state." Physically the patient was pale and thin; there was a considerable scar over the left mastoid process, complete left facial paralysis, the tongue protruded notably to the right side (i.e., towards the healthy side of the face), and the right hypoglossal was apparently paralysed, the lesion affecting the left cortical centre (?). (Dr. Lord, Hanwell Asylum, confirmed the observation as to the tongue.) The hearing was very defective on the left side and sound was not conducted by the bone, the auditory nerve being involved. Later, when the patient came to himself, he complained of a difficulty in deglutition, for which possibly a lesion of the glosso-pharyngeal nerve or nerves may have been responsible. No other cranial or other nerve was found to be affected. There were no spinal symptoms. The patient remained in the same condition until Sept. 11th following. Marked delusions of suspicion then developed but were very transient and he began to brighten up. He subsequently described how he came to his senses about the 18th, and by the 25th he appeared to be quite rational. He could remember nothing whatever of events subsequently to the kick; from that date (July 12th) to Sept. 18th was a complete blank. He "woke up" to find himself paralysed over the left half of his face and with a difficulty in swallowing. The patient was discharged recovered on Oct. 12th, 1898, after from six to seven weeks' residence in the asylum. The condition of the face and tongue and of deglutition were unchanged. When last heard of, one month after discharge, he was well and at work.

CASE 2.—The patient was a man, aged thirty-five years. There was no family or personal history of insanity or allied disorders. There was no congenital mental defect. He was temperate. Ten days before admission he received a very severe blow on the left frontal region from a revolving crane handle. The outer table of the bone was felt to be fractured by the medical attendant. The patient was unconscious for a quarter of an hour after the blow and never spoke rationally again before removal to the asylum. There was slight bleeding from the left nostril. His medical attendant described him as being in a state of "cerebral irritation" for forty-eight hours after recovering consciousness. There were slight twitching of the right arm and leg, with some dilatation of the left pupil, and raised temperature. At the end of forty-eight hours he could be recalled to himself; he complained much of pain over the left frontal region. Symptoms of mania then developed and on June 30th, 1894, he was removed to the asylum. On admission there was great incoherence with repetition of words and much motor restlessness; his attention could not be gained and mistakes of identity were numerous, with failure to orientate himself in time or place—a state of subacute mania, with much mental confusion. Physically the patient was healthy. The left pupil was the larger, but reactions were normal in both. There was a recent scar over the left frontal eminence 1½ in. long. The mental condition persisted, with exacerbations of

[1] Deutsche Sanitätsbericht.

[2] Die Geistesstörungen infolge von Kopfverletzung, Vierteljahrschrift für gerichtliche Medicin und öffentliches Sanitätswesen, dritte Folge, Band xiii., Heft 1.

acute excitement, until July 15th of the same year, when he became more maniacal — destructive, stripping himself naked; he was very talkative, with much repetition of phrases. After a few days he became quieter and on July 22nd was reported as much improved. He was sent out to work in the grounds, and convalesced rapidly. His memory was impaired. He was discharged recovered on August 30th, 1894, after two months in the asylum. He resumed his work. When last heard of, a year after the accident, he was quite well and working.

CASE 3.—The patient was a man, aged thirty-four years. There was no family or personal history of insanity or allied disorders. There was no congenital mental defect. He was temperate. Five weeks before admission a topmast fell and struck his head. His wife stated that he was unconscious for three days and "bled from the ears." Subsequently he complained much of pains in the head, suffered from insomnia, and became very restless and incoherent with indistinct utterance. The patient was admitted to the asylum on July 5th, 1897. Upon admission he was noisy, requiring a sedative at night, tearing, restless, unable to fix his attention, and his comprehension was very limited. In replying he often failed to find words, stopped short, and looked puzzled and confused and was much annoyed at his inability to express himself. He had hallucinations of hearing and probably of sight. He talked incoherently to himself for long periods. He made many mistakes in identity. He had no notion of time or place. There was marked intellectual disturbance—"an acute confusional state." Physically he was healthy. He continued in the condition described above during July, becoming, however, gradually more self-satisfied and elated. At the close of July he became hypochondriacal and remained so for most of August. Early in September he improved greatly and could be employed. He was discharged recovered on Oct. 16th, 1897, rather more than three months after admission. He visited the asylum about a month after discharge and appeared to be quite well; nothing has been heard of him since.

CASE 4.—The patient was a man, aged fifty-six years. There was no family history of insanity or allied disorders. There was no congenital mental defect. He was of doubtful temperance. He was in this asylum in 1866, admitted in May, apparently in a state of mania. He was discharged in September of the same year recovered. He has since been employed and earning his living. Eight weeks before admission he received a kick from a horse which rendered him unconscious for an hour. According to his medical attendant the frontal bone was fractured. He began to wander about, became threatening, refused food, and finally developed symptoms of mania with marked incoherence. He was admitted to the asylum on Feb. 1st, 1898 (nearly thirty-two years after the date of his previous discharge). The mental state on admission was one of mild mania—great incoherence and loss of attention-power. Physically he was healthy. There was a healing scar between the eyebrows, the seat of injury. Improvement began in March following admission and was progressive. He was discharged recovered on July 2nd, 1898—five months after admission.

The above four cases have certain features in common—namely, there was no heredity of insanity or allied disorders known of; no previous history of mental trouble in the individual except in the last case (thirty-two years before); the patients were healthy and temperate (excepting the last case, in which this was doubtful); the injury was a severe one and the skull was fractured in probably three of the cases; insanity in each case supervened practically immediately after the period of unconsciousness which followed the blow; the mental state was one of mania, fairly acute, with much incoherence and mental confusion; it was of short duration and all were discharged recovered and resumed work. The literature on the subject goes to show that when insanity follows forthwith upon a head injury the latter is usually of a decidedly severe kind. Most writers note a considerable similarity in the mental symptoms in different cases in adults. The condition is commonly one of mania in greater or less degree, or there is a confusional state, with great incoherence and less excitement. Rapid convalescence is often noted, though some intellectual defect may remain after the symptoms of insanity necessitating confinement have passed. On the other hand, it is well known that paralytic dementia may be occasioned by cranial injury.

Carmarthen.

THE

INOCULATION THEORY OF MALARIAL INFECTION.

ACCOUNT OF A SUCCESSFUL EXPERIMENT WITH MOSQUITOES.

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(*Continued from p. 1463.*)

THE first experiment was made with G. N——, an epileptic patient in the wards of the Hospital of San Carlo, and with another epileptic patient of whom I have kept no record because he remained under observation only a very short time. G. N——, a robust young man who suffers from attacks of epilepsy at long intervals, has been for about two years in the Hospital of Santo Spirito, where he assists the nurses in attending to the other patients. He has never had fever nor has he ever resided in malarious places. This man and the other of whom I have spoken were exposed for three days to the bites of mosquitoes taken from Porto where they were caught in the adult state. But as in this first experiment I only succeeded in obtaining a small number of these diptera and the bites were very few I resolved to adopt another plan in my next experiments. I may note in passing that this experiment was commenced in precisely the same manner as that which later gave a positive result and that I stopped it solely on account of the impossibility of obtaining sufficient material.

In order to secure an abundant supply of mosquitoes I resolved to procure their larvæ which are found in immense numbers in the stagnant pools of the Campagna. These larvæ were brought to me in glass vessels which were opened in the mosquito-room. In a few days the production of mosquitoes was such that they might be counted by hundreds. The supply of water with its freight of larvæ was renewed every four or six days by the help of an employé from our Institute of Comparative Anatomy who collected the water either at Porto, near Fiumicino, a place, as I have said, of highly malarious character, or near Carroceto, an isolated station on the Anzio line infested by malaria of a bad type. I obtained in this way the means of maintaining a most abundant supply of mosquitoes for a long time in the conditions most favourable for ascertaining experimentally whether the bites of the variety or varieties of insects thus hatched out were capable of affecting man injuriously.

The experiment was begun in this manner only upon G. N——, who slept in the mosquito-room from August 8th to Sept. 22nd of this year under my constant supervision. He was very much bitten. On August 22nd he felt unwell with a sense of chilliness, and the temperature rose at 8 A.M. to 37·3° C. (99·1° F.), and at 1 P.M. to 37·4° C. (99·3° F.). At 3 P.M. it was 37·2° C. (99° F.), and on the following days it stood at 37° C. (98·6° F.) in the afternoons until the 29th, after which it remained constantly below 37° C. Except for this slight elevation of temperature, lasting, one might say, for only one day, and commencing with chilliness and headache, there was no further sign or symptom of illness, and up to this moment the man remains perfectly well. Naturally, on August 22nd and the following days examinations of the blood were made with great care and diligence, without its being possible, however, to discover any parasites. Some specimens of the hatched mosquitoes were preserved in order that the species might be identified afterwards.

The second experiment was commenced on August 24th on another subject, A—— S——, who had never had malarial fever and who had been for six years a patient in the hospital in the Santa Maria section which is directed by my colleague, Dr. G. Bastianelli. S—— had thus for a very long time been continuously under the observation of a physician who has for many years made a special study of malaria. I cannot but dwell upon this fact since it is of the utmost value in freeing the experiment from a source of serious error. In order likewise to be prepared for possible objections I obtained a complete history of S—— from his earliest years until he entered the Hospital of Santo Spirito and came under our observation there. From this it appears that he had never suffered from malarial fever at any period of his

life. He was admitted to the Hospital of Santo Spirito in the beginning of October, 1892, and since then he has presented no other symptoms than hemianæsthesia, neuralgic pains in the joints, volitional tremor, and simple polyuria which at times was slight and at other times very severe. His case was thus a chronic nervous one the exact diagnosis of which it is not necessary here to discuss.

With this subject, then, the second experiment was begun on August 24th of this year and carried out in the same manner as the preceding one. S—— slept in the mosquito-room till Sept. 19th. During all this time the supply of mosquito larvæ obtained from the stagnant pools at Porto and brought to Rome in glass vessels was renewed from time to time at intervals of from four to six days. Only once was the supply obtained elsewhere—namely, from a place between Maccarese and Ladispoli. A very abundant provision of mosquitoes was thus secured and the patient was very much bitten. S—— remained well up to Sept. 10th, when he began to suffer from headache in the morning and malaise. On Sept. 10th the temperature rose to 37·2° C. (99° F.) and then until the 17th it remained normal, when it again rose to 37·3° C. (99·1° F.) and the patient felt ill, complained of severe headache, and had a sense of chilliness. On the succeeding days the temperature did not rise above normal, but the feeling of malaise continuing, with headache and a suffering aspect, the experiment was stopped on the 19th and the patient returned to sleep in the ordinary ward where he soon became perfectly well.

The examination of the blood for malarial parasites, made with every care, especially during the last few days, gave a negative result. Some specimens of the mosquitoes hatched rom the larvæ were preserved for identification.

The result of the experiments so far described being negative (except for the slight elevations of temperature which I shall deal with later) various speculations naturally arise in the mind. Supposing it to be true that malaria may be inoculated on man by mosquitoes the non-success of this experiment might have been due to want of susceptibility in the individual experimented upon. Nor is this an improbable explanation, for not only is it well known that there are certain persons who may remain for more than a month in a highly malarious locality without contracting malaria, but there are some individuals (as Celli's experiments have shown) who, even when inoculated hypodermically with blood containing æstivo-autumnal parasites, do not take the infection. Now, we know that there is held to be no surer way of producing malaria in healthy persons than by thus injecting malarial blood. On the other hand, we might suppose that the mosquitoes employed in the experiment although taken from malarious places did not happen to contain any malarial parasites or even that they did not belong to a variety or varieties adapted to act as hosts to the parasites. Such explanations appeared to me all the more likely in view of the important observations of Ross[1] who in the series of researches already referred to only found the developmental forms of his Proteosoma coccidia in one particular species of the mosquitoes which had bitten birds infected with proteosoma—to wit, in the grey mosquito.

But this last hypothesis was rendered more than likely in consequence of the observations of Grassi whose article appeared at the end of September when my experiments were already at an advanced stage. Grassi established the fact that in malarious districts certain species of mosquitoes exist which, according to his researches, are not found in healthy places. Now, if it be mosquitoes which inject the malarial parasites into man it is evident that they will in all probability be of those species which, according to Grassi, are peculiar to malarious places. Hence it was necessary to repeat the experiment, procuring for the purpose first of all those very species and, since it is difficult to obtain any considerable quantity of their larvæ, to collect from some malarious place in the Campagna the greatest possible number of adult mosquitoes—in fact, to repeat the experiment in the same manner as that in which I had gone to work in the first instance when for want of material I was not able to continue it for a sufficient length of time. The collecting was done at Maccarese, where by Grassi's instructions one of the employés at the laboratory of comparative anatomy was stationed who every day sent a supply of these diptera to the Hospital of Santo Spirito, where they were set at liberty in the mosquito-room as formerly.

[1] Report of the Cultivation of Proteosoma-Labbé in Grey Mosquitoes Calcutta, 1898).

Thus was begun on Sept. 26th the third experiment. S——, who was by this time completely recovered from the indisposition following upon the preceding experiment, again consented to be the subject. I could not succeed in finding anyone else intelligent enough to understand the importance of the test and so self-denying as to submit to it. Along with S—— there slept in the mosquito-room another patient with nerve disease who, like S——, had never had malaria nor, as far as he was aware, had ever been exposed to the infection. And for a couple of nights a third patient, also a nerve case, slept in the room, but with this man the experiment was not continued. On Oct. 3rd I was obliged for want of new material to suspend the experiment. On the 10th it was again resumed, still with mosquitoes from Maccarese. From the 10th till the 14th there was an abundant supply of mosquitoes. On the 14th Sola complained of malaise and headache, on the evening of the 16th (at 6 P.M.) his temperature was 37·1° C., and on the following days he felt better. From the 17th to the 21st there were but few mosquitoes left in the room; nevertheless both patients showed evident signs of having been bitten. From the 19th to the 23rd no fresh mosquitoes were brought; on the 23rd there was a new but only a small supply. From this date onwards until the experiment came to an end there were but very few mosquitoes in the room; the patients were, however, certainly bitten. During the last days of October S—— complained of malaise and headache. On Oct. 31st his temperature showed a slight elevation to 37·2° C. (99° F.). On Nov. 1st at about 3 P.M. he was seized with severe shivering which lasted till 5 P.M., the temperature rising rapidly to 39° C. (102·2° F.); between 9 P.M. and 10 P.M. he again experienced a sense of chilliness. The fever continued all night. On the next morning (Nov. 2nd) the temperature was somewhat lower (38·2° C.), but it rose again in the afternoon to 39 3° C. (102·7° F.). The patient was agitated; he complained of very severe headache but did not present any grave symptom. About 11 P.M. he again had the sense of chilliness but only for a short time. During the night of Nov. 2nd the temperature remained at 39° C. (102·2° F.) and on the morning of the 3rd it rose again to 40·4° C. (104 7° F.), the patient being in great agitation and suffering. During the afternoon the fever showed signs of abating and there was slight perspiration. At 5.15 P.M. a hypodermic injection of quinine was administered (15 gr.), and this was repeated (in the same dose) during the night. The fever subsided and at 8 o'clock on the following morning (Nov. 4th) the thermometer registered 36·7° C. (98·1° F.). During the next few days the administration of quinine was continued, the patient having a slight elevation of temperature which did not, however, reach 38° C. (100·4° F.), except on the 6th. From Nov. 7th onwards the patient was entirely without pyrexia and he rapidly recovered his appetite and went on regaining his strength.

A careful examination of the blood made on Nov. 2nd gave a negative result; in spite of the most diligent search not a parasite was to be found. On the morning of Nov. 3rd I found young amœboid parasites, few in number, mobile or discoid and without pigment, with the appearance characteristic of those of autumn fevers. These forms went on increasing in number during the course of the day and in the afternoon they were present in considerable quantity, some of them presenting pigmentation at the edges, the pigment being in very fine granules. Before the quinine was given dry preparations of the blood were made by fixing with absolute alcohol and staining by Romanowsky's method and with hæmatoxylin and eosin. In these preparations the parasites present the characteristic annular forms with the particle of chromatin stained in the typical way.

Thus there was produced experimentally in the case of S—— a grave form of malarial fever with the temperature curve which is often seen in a primary æstivo-autumnal attack. The fever having begun sharply continued with slight intermissions from Nov. 1st to the 3rd, when it showed signs of abating towards evening and the quinine was administered. The parasites found in the blood belonged to the æstivo-autumnal variety, so that, keeping this in mind and also the course of the temperature, we may conclude that the continuous curve of the latter would, but for its interruption by the quinine, have developed into that of an autumnal tertian fever.

It is perhaps the first time that in a primary æstivo-autumnal infection contracted in the natural way the examination of the blood has been made from the beginning of

the fever. It is noticeable that the parasites were found after about forty hours, at first few, then rapidly becoming more numerous.

It seems to me and to all those who watched the experiment that it was conducted in such a manner as to meet all possible objections. Let me repeat that S—— is a man of robust constitution, despite his nervous malady, who, as a minute inquiry shows, had never in all his life suffered from malarial fever and had not for the last six years left the Hospital of San Spirito, where he had all that time been under the observation of Dr. G. Bastianelli. The room in which the experiment was carried out forms one of the annexes of the San Carlo ward, where none of the physicians have ever known an autochthonous case of malarial fever to occur nor has malaria ever been known to originate in any of the neighbouring houses.

The objection that the experiment cannot be considered as conclusive because it was made in Rome, where some persons imagine there is always danger of contracting malaria, can only have an appearance of value for those who do not know Rome and the distribution of malaria in our district, for all the local medical men are well aware that although there are some malarial foci at certain points of the outskirts the city itself is quite healthy and long experience has shown that no one at any season ever contracts the fever there. The Hospital of San Spirito is so situated as to preclude any suspicion of the kind. Now, in a room of this hospital a patient contracts malarial infection produced by æstivo-autumnal parasites with a continuous fever and symptoms of a nature to render necessary the prompt administration of quinine—one of those fevers, in fact, which are commonly contracted by the labourers in the Roman Campagna in the summer and autumn months and which, as we know, usually begin with the temperature curve described by Marchiafava and myself as typical of the summer tertian fever or even with a continuous curve. This fever, then, identical with those prevalent at Maccarese, was contracted by S—— in surroundings in which there was neither the water nor the air nor the soil of Maccarese, but *only its mosquitoes*. Hence we are forced to the conclusion that this fever was actually inoculated by these mosquitoes. In this manner I obtained an experimental production of malaria under conditions narrowly circumscribed, a healthy room being transformed into a malarious environment by introducing into it mosquitoes taken from a malarious locality. The conditions under which the experiment was conducted were, in short, such that I cannot conceive of any source of error which can have crept into it to vitiate the result, and it is clearly impossible to draw from it any other conclusion than that the fever contracted by S—— was inoculated by the mosquitoes. The result obtained constitutes, in my opinion, a positive proof which of itself and *per se* is sufficient to furnish a secure basis for the theory of inoculation.[2]

But by which species of mosquito was the fever inoculated? To this inquiry the experiment, from the way in which it was conducted, does not give an answer as conclusive and as free from objections as it gives to the fundamental question itself. I have said that some specimens of the mosquito with which the various experiments were carried on were preserved for identification and classification. Professor Grassi has found that some of the specimens hatched from larvæ with which the first experiments were made belonged to Culex pipiens. During the third experiment, Grassi being in Rome, some of the mosquitoes were sent to him every time a batch was received at the Hospital of Santo Spirito. Amongst these, captured in the adult state, Grassi identified the Culex penicillaris, the Culex malariæ (so-called), and Anopheles claviger; but of this last species only a few individuals were sent and only on one occasion during the course of the experiment. It follows therefore that S—— was bitten by the Culex pipiens from August 24th till Sept. 19th and by the other three species, especially by the two first, from Sept. 26th until the end of October.

According to Grassi it may be taken for granted that when the experiments were made with mosquitoes hatched from larvæ collected in the Campagna the insects obtained would be the Culex pipiens, because the larvæ of this species are found in great swarms and are in consequence easy to collect, while the larvæ of the other species named are found with more difficulty and not in swarms. I believe, however, that while the Culex pipiens no doubt predominated in the first experiments one cannot be quite as certain that there were not present in smaller quantity individuals of the other species which also frequent the malarious parts of the Campagna. Hence we cannot exclude with absolute certainty the possibility that in the second experiment there may have been along with the Culex pipiens also some individuals of the same species which were employed in the third experiment. On the other hand we cannot with certainty exclude the possibility that the infection may have come in the period between August 24th and Sept. 19th; indeed, cases are known (and I myself have several times met with such) of individuals in whom the fever began even more than a month after they had left the malarious locality. But it is certainly much more likely that the infection came in the last period of the experiment—that is to say, while the mosquitoes were being brought from the Campagna in the adult stage—and the prevailing species were those which Grassi has found only in malarious localities.

Grassi, in the study which he made during last summer of the distribution of mosquitoes in malarious and non-malarious localities, came to the conclusion that in malarious places in addition to the species which are found in non-malarious districts there are others which are absolutely unknown in these latter. In non-malarious districts the predominating species is the Culex pipiens; in malarious places, on the other hand, are found the Anopheles claviger (maculipennis), the Culex penicillaris, and other species, which therefore appear to have an intimate relation with malaria. One of these species, apparently not yet described, Grassi found at Maccarese and he named it "Culex malariæ."

The coincidence between the distribution of malaria and that of certain species of mosquitoes, especially the Anopheles claviger and the Culex penicillaris, is a fact of great importance which naturally lends itself to various interpretations. The opponents of the mosquito theory, for example, might hold that the same conditions which permit the development of certain species of mosquitoes in particular places which are malarious and not in others which are healthy likewise permit in the first-mentioned the development of the malarial parasites; hence the coincidence in their distribution. But when once it has been *demonstrated that malaria is inoculated by mosquitoes* then only can it be affirmed that between the species found by Grassi in malarious places and malaria there must exist an intimate causal relationship. The demonstration of the fundamental fact having now been given, as we have seen, everything points to the probability that in my experiments the mosquitoes which inoculated the malaria are to be found among the Culex penicillaris, the Culex malariæ, and the Anopheles claviger. This last species was represented by only very few individuals. It is thus probable that the greatest importance attaches to the Culex penicillaris or the Culex malariæ or perhaps to both of these species.

But on this aspect of the question I shall dwell no longer. My experiments were directed towards ascertaining whether malaria is inoculated by mosquitoes, and while they have yielded a decisive result as far as that fundamental problem is concerned they cannot have any other value in regard to the remaining questions than as guides towards their solution. But from this point of view they give an experimental support to the idea that the Culex pipiens is innocuous and appear to indicate the Culex penicillaris or the Culex malariæ as most probably the intermediate host of at least one species of malarial parasite.

Here it may be demanded why it was that fever did not develop in the other individuals who sojourned for so long in my "camera malarica"? The answer is obvious, that while instances of absolute immunity from malaria in our race is extremely rare one nevertheless meets very frequently with individuals who even in districts of a highly malarious character are seized with their first attack of fever only after a sojourn of some months' duration. This explanation will apply to the immunity enjoyed by the second subject who was placed under exactly the same conditions as S—— during the whole course of the third experiment. On the other hand, the negative result of the first two experiments made in August and September is to be explained in all likelihood by the fact that the subjects of them were exposed

[2] An investigation might also be made as to whether mosquitoes which have bitten malarious persons are capable after a certain time of inoculating a healthy individual with malaria. This is, however, a separate experiment. My idea was, on the other hand, to discover whether mosquitoes in the native state, so to say, in which they are procured from the Campagna, could convey infection to a healthy person.

exclusively, or almost exclusively, to the bites of the Culex pipiens. From this point of view my two first experiments, carried out under conditions identical with those of the third, except in regard to the species of mosquito employed, served up to a certain point as controls to the last.[3]

It might also be asked what explanation can be given of the slight elevations of temperature with sense of chilliness, headache, and general malaise, noticed in the subjects of the first and second experiments towards the end of the periods over which they extended? I consider that they had probably nothing to do with malaria, since the clinical record as well as the minute examination of the blood tends to exclude the supposition. But it has been observed that some individuals are subject to slight and transient elevations of temperature when exposed to the bites of mosquitoes. Now, it must be remembered that these patients were very severely bitten on account of the enormous number of diptera developed from the large supplies of the collected larvæ.

Is the bite of certain species of mosquitoes the only means, it will next be asked, by which the malarial parasites penetrate into the human organism? In other words, is malaria only contracted by inoculation? So much is certain—viz., that *inoculation is up to the present the only means for which experimental demonstration has been obtained.* But to demonstrate experimentally that the fever cannot be contracted in other ways a long series of researches would be required, conducted in the manner indicated by me at the commencement of this paper. It would be necessary to observe how a large number of persons are affected by malaria when they are all maintained under the same conditions of life in some highly malarious centre, a portion of them being protected and another portion unprotected against the bites of mosquitoes. In this manner an experimental solution of this problem also may possibly be found.

In the meantime we are justified in considering malaria as exclusively a disease of inoculation. I had already arrived at the same conclusion as I have now reached in the direct way by a process of exclusion. By arguments derived from epidemiology and pathology I excluded the theories of air- and of water-conduction and further rested my contention upon certain facts of analogy. The arguments based upon analogy, as I pointed out in my first paper, are chiefly taken from what is known of the "cattle fever of Texas" which is inoculated into the animals by a tick (Boophilus bovis, Riley). The very important experiments of Smith and Kilborne demonstrate, in fact, not only that the young ticks artificially reared inoculate the infection when they are placed on susceptible animals, but also that the tick is *necessary* in order that the infection may be transmitted. I believe it may be safely affirmed that all the facts known up to the present regarding the biology of the parasites allied to those of malaria favour the idea that infection is conveyed by only one way and introduced by only one method.[4]

And now, having securely established a starting point for our researches, a long series of problems opens up for solution. Under what form are the malarial parasites present in the mosquito? Is it the same species of mosquito which inoculates man with various forms of malarial fever, or are there different species, as the investigations which have so far been made would lead us to believe? And from where do these diptera get the parasite? Do they perhaps take it from man, as might be supposed from analogy with what is known of the fever of Texas, and does the malarial parasite complete one life-cycle in the mosquito in the same way as it completes the other in man? Or, on the other hand, as Manson[5] supposes on the strength of Ross's researches with birds infected with proteosoma, must the parasites be regarded as, above all, parasites of certain species of mosquitoes by which they are only accidentally inoculated into man? Regarding these and other questions, investigations are now being prosecuted. For the present I shall content myself with observing that whatever may be the answer to these questions once the great fundamental problem of how the fever is taken has been solved the practical question of prophylaxis straightway emerges from the uncertainty which now surrounds it, and I do not doubt that it will be easier to find a means of defence against the enemy when we know by what way he comes and by what weapons he assails us.

To sum up, malaria is a disease which is contracted by inoculation—a fact of which we have now obtained the first experimental proof, since we have seen that an individual who has never had malarial fever by sleeping in a healthy place where no one had ever previously taken fever may sicken with malaria of a grave type if bitten by certain species of the mosquito brought in the adult state from some distant locality of highly malarious character. Further, everything points to the conclusion that inoculation is the only mode by which infection is acquired, since air and water as carriers of infection may be excluded and because arguments based on analogy all tend in the same direction. This much at any rate we can assert—namely, that inoculation is the only mechanism of infection which has been demonstrated experimentally.

Institute of Pathological Anatomy of the Royal University of Rome.

(To be continued.)

[3] I say this with reserve because one cannot yet exclude the possibility that even the Culex pipiens may be infective in some malarious places.

[4] I have not neglected to make other investigations with the object of finding fresh facts for or against the possibility of the *inhalation* theory. It has been objected against the air-conduction theory that the malarial parasites are so delicate that they cannot resist desiccation. But no one, as far as I am aware, has attempted to ascertain if this really be the fact. In a case of summer tertian fever with very many parasites I removed from a vein by means of a Pravaz syringe about 1 c.cm. of blood and left it to dry in several sterilised Petri's capsules in a very thin layer for about forty-eight hours at the temperature of the air (30° C.) I then mixed it with a normal solution of chloride of sodium at about 37° C. and injected it under the skin of an individual who had not had malaria. This was on August 15th of the present year and up to this time the patient remains perfectly well. Proceeding in the same manner I dried in sterilised Petri's capsules some drops of the splenic contents taken during life from a case of pernicious fever in which there were innumerable parasites in all stages of development, including that of fission. The desiccation this time lasted about one hour and three quarters. I injected the dried blood under the skin of another person who had never had malaria on August 31st. The result was again negative. I do not attach much value to these experiments. It would be desirable to repeat them, varying the conditions. They only show that the malarial parasites which are found in the human body do not resist desiccation even for a short period under the conditions which I have described. I also began other investigations, starting from the assumption, admitted by many, that the germs of malaria may find entrance along with dust by inhalation. In that case they ought to be found, one would suppose, in the peri-bronchial glands of individuals residing in highly malarious localities. I therefore examined, both in the fresh state and with various stains (especially with methylene blue), the contents of the peri-bronchial glands of individuals from malarious parts of the Campagna who died after a short residence in the Hospital of Santo Spirito. I saw nothing, however, to excite the least suspicion of the presence of parasites.

[5] Loc. cit.

DIPHTHERIA ANTITOXIN IN PRIVATE PRACTICE.

BY E. C. BOUSFIELD, L.R.C.P. LOND., M.R.C.S. ENG.,
BACTERIOLOGIST FOR THE PARISH OF CAMBERWELL.

IN view of the importance of the question I am led to offer a few observations upon this subject suggested by the able and comprehensive paper of Dr. Louis Cobbett in THE LANCET of Dec. 3rd, 1898. It must not be supposed that these observations constitute a claim upon my own part to be regarded as a specialist. My chief reason for offering them is that whilst many tables have been published showing the death-rate in hospitals the records of the use of antitoxin in private practice are few and far between.

My first experience of this remedy dates back to the time when Dr. Klein was investigating the matter early in 1894 on behalf of the Local Government Board. At that time I had a "return" case of diphtheria and Dr. Klein was good enough to furnish me with a quantity of the serum for use in this case. The result was nothing short of a revelation, the temperature fell within nine hours after the use of the remedy and the membrane had disappeared from the throat in twenty-four hours. Since that time I have used no other remedy in the initial stages of diphtheria and have employed it in 33 cases, with one death. This latter was a patient whom I saw for the first time on the fourth day of the disease and who was removed to hospital. Possibly a second injection might have saved this life too.

Of after-effects beyond urticaria I have nothing to relate, and my impression is that even the urticaria was due to the method of preparation of the antitoxin, since I have not observed this symptom for a long time now. Paralyses, never severe, have followed the disease in a certain number of cases, but there is no evidence to show that antitoxin has the power of undoing mischief already suffered by the nerves.

[9] Loc. cit.

before the use of the remedy. In no case has any local inflammation occurred at the seat of injection. I may remark in passing that I invariably choose the subcutaneous tissue of the abdominal parietes. The skin is loose here, so that the distension caused by the injection gives rise to very little pain, and should any slight local soreness remain for a few days it does not interfere with the patient's comfort in lying down, whilst the comparative thinness of the skin greatly facilitates the operation.

Whilst it is my habit to make a bacteriological examination of the cases of diphtheria which I attend I do not think of waiting for the result before operating. Experience shows that a considerable number of cases occur in which, whilst the clinical signs are somewhat doubtful, the disease responds to antitoxin, so that the latter must be looked upon as a diagnostic agent as well as a curative one. It seldom happens that a second injection is required. In only 2 of my 33 cases has this occurred. One was a case which did not come into my hands until another medical man had stated that nothing more could be done; the other was a very severe case following immediately on an attack of erysipelas not completely recovered from. In both these cases the first injection produced a considerable improvement, but this was not fully maintained, and a second injection was administered at the end of twenty-fours with perfect success.

There are several important points with reference to the use of antitoxin which have not received the attention which they deserve. The first is that the remedy should be used immediately the disease is discovered. The statistics of the Metropolitan Asylums Board show that whilst even with the delay occasioned by the removal of the patient to hospital cases injected on the first day show a 4 per cent. mortality, a delay of twenty-four hours causes a rise to 15 per cent., and that this increases at the rate of about 7 per cent. per diem. I contend, therefore, that it is the duty of every medical man to apply antitoxin immediately in every case of diphtheria or suspected diphtheria which he sees, without waiting for the patient's removal. The mere adoption of this plan would probably reduce the London death-rate to one-third of its present amount—indeed, probably much lower. The objection will naturally be made that in many of these cases the expense of providing the remedy would fall upon the medical man. This should be obviated by the action of local authorities. A supply of antitoxin should be kept at some point or points where it is constantly accessible and if necessary the services of a medical practitioner should be available for its administration. There can be no doubt that Dr. Cobbett is right when he asserts that medical men do not in many cases (I fear in the majority) recognise that the agent in question is one which is capable of robbing diphtheria of its terrors and that the evidence of its utility is such that those who do not use it incur a grave responsibility. I should go even further and assert that the responsibility is nothing short of criminal. Antitoxin is no longer upon its trial. Its utility has been proved, and since no other remedy is known to have the slightest direct influence upon this dire disease there is no possible excuse for a failure to try it.

As regards after-infection statistics are at present wanting to enable any direct assertion to be made, but since the membrane clears off the throat within at most forty-eight hours it seems clear that there can be no further growth of virulent diphtheria bacilli and that a week probably represents the outside time during which it is necessary to isolate the patient. In my early cases I endeavoured to persuade the attendants to allow themselves to receive a protective injection, but in view of the shortened period of infectivity I now content myself with ordering the nurse to gargle with Jeyes' fluid 1 in 1000 and to use the same agent 1 in 500 for general disinfection; in either of these strengths it can be readily borne by the skin or even mucous membranes.

In conclusion I appeal most earnestly to my fellow-practitioners to use antitoxin *immediately* in every clear or doubtful case of diphtheria, feeling assured that in no other way is it possible to seriously diminish the mortality and that, as I have said, even the delay of sending cases into hospital means a distinct and decided increase in the death-rate such as no self-respecting or humane practitioner would willingly be a party to. It seems desirable to add that I habitually use, and am entirely satisfied with, the antitoxin supplied by Messrs. Burroughs, Wellcome, and Co., of 1500 units.

Old Kent-road, S.E.

REACTIONS IN CASES OF WOUNDS AND ULCERS TREATED BY OXYGEN GAS.

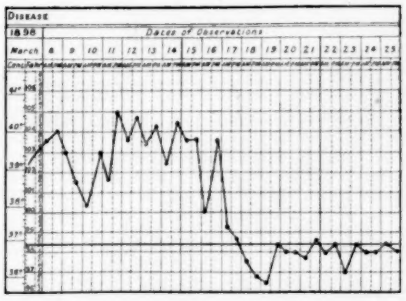
BY GEORGE STOKER, M.R.C.P. IREL.

IT has been observed in almost all the cases treated by oxygen gas that at some time during the treatment, varying from a few days to a few months, a distinct toxic reaction occurs and that from the time of such occurrence the wound or ulcer heals much more rapidly. Out of many such cases a few typical ones have been selected in order to illustrate their toxic reaction and their temperature charts and notes are given below. In considering these cases it must be remembered that in all of them the discharges were carefully examined from time to time and found to contain a pure growth of staphylococcus pyogenes albus, aureus, or citreus. The points of special interest which have been observed in reference to the above are:—1. That healing was not delayed but was accelerated during and after the time the temperature was highest. 2. That the wounds did not become inflamed or dry and the discharge continued healthy. 3. That there was a good deal of inflammation of the lymphatics and some swelling of the glands in the neighbourhood of the ulcer. 4. That in some cases—e.g., Cases 2, 6, and 7—small secondary areas of infection existed where small abscesses formed, burst, and healed rapidly. 5. That in all the cases observed the general malaise or disturbance was small in comparison to the height of the temperature. The tongue remained clean, there was little headache, and no sickness.

Taking the above facts into consideration it is not unreasonable to conclude, as already suggested, that oxygen acts by forming an antitoxin from the secretion of the micro-organisms present in the wound or ulcer. It is possible that the antitoxins which are made by injecting horses, &c., with toxins are formed by a somewhat similar process of oxidation taking place in the blood of the animal so injected. This would further suggest the necessity of preparing an antitoxin for each separate case from its own micro-organisms, especially in more malignant forms, it being presumed that an antitoxin must have a toxin present on which to act or react. Acting on this belief antitoxins have been prepared for many cases by passing a stream of oxygen from a broth culture of the micro-organisms from each case; the broth is then dropped on the wound where it is absorbed. The results of this method have been satisfactory not only in cases of a non-malignant character but also in cases of lupus and rodent ulcer. It is hoped and believed that working in this way and preparing antitoxin as above described that the satisfactory treatment of malignant disease may be ultimately reached.

CASE 1.—This patient had varicose ulcers of both legs of seventeen months' duration. He was treated for several months as an in-patient at a general hospital. Complete

FIG. 1. (CASE 1).

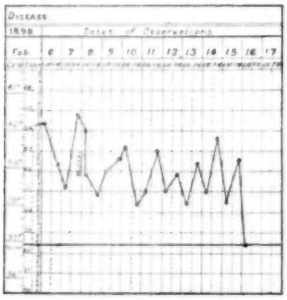


rest, grafting, &c., were tried, but without success. Under oxygen treatment the reaction did not appear till after eight months. He is now quite healed.

CASE 2.—The patient had chronic ulceration of the right leg of eight years' duration probably the result of hereditary

syphilis, he having lost his soft palate at four years of age. Ulceration was very extensive, reaching behind from the apex of the popliteal space to the lower border of the calf in

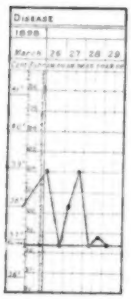
FIG. 2 (CASE 2).



front from above the patella to the front of the ankle. These ulcers are now healed. A secondary abscess formed which is now healing rapidly. Reaction occurred on the ninth day of oxygen treatment.

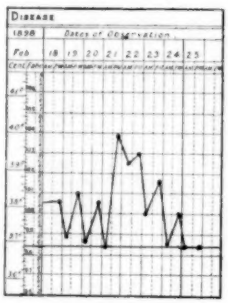
CASE 3.—The patient had an ulcer on the front of the shin of six weeks' duration the result of an accident. She was discharged cured in five weeks, the reaction occurring on the sixteenth day.

FIG. 3 (CASE 3).



CASE 4.—The patient had two small ulcers on the outer side of the leg above the knee. He also had two long sinuses, one leading inwards and backwards to

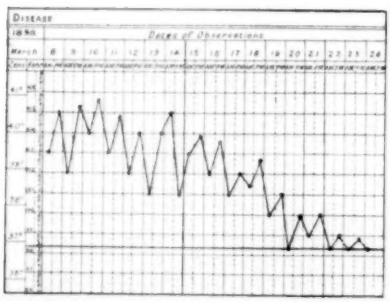
FIG. 4 (CASE 4).



the apex of the popliteal space and the other upwards on the outer side of the leg. Oxygen was passed through the sinuses by means of a tube and the ulcers were exposed to oxygen in the usual way. The patient made an excellent recovery and now after many months there is no sign of recurrence. Reaction took place on the twenty-second day.

CASE 5.—The patient had chronic ulcers of each leg of

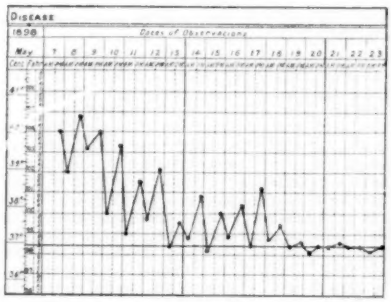
FIG. 5 (CASE 5).



eight years' duration the result of an accident. Both legs are now quite healed. The reaction occurred on the fifth day.

CASE 6.—The patient had a very large chronic ulcer of the right leg of eight years' duration. The patient had been treated in various ways, including prolonged rest, but without cure. The ulcer was the result of an accident. The

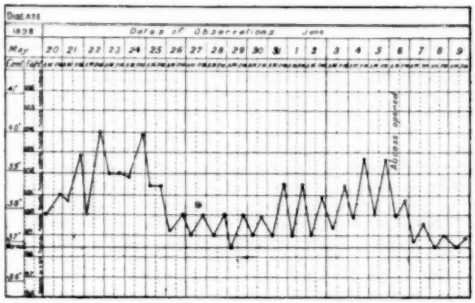
FIG. 6 (CASE 6).



patient is now almost well. The reaction began on the fifth day of oxygen treatment. In this case there was an area of secondary infection.

CASE 7.—The patient had a chronic ulcer on the shin of three years' duration. She had several areas of secondary

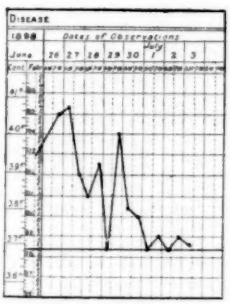
FIG. 7 (CASE 7).



infection where small abscesses formed but quickly healed again under oxygen. The reaction occurred on the seventh day.

CASE 8.—This patient had two ulcers on the left leg the result of an accident. The ulcers had existed for four years.

FIG. 8 (CASE 8).



In this case the reaction took place on the thirteenth day. Both ulcers are now quite healed.

Hertford-street, Mayfair, W.

LONDON WATER SCHEME.—At a special meeting of the Water Committee of the Glamorganshire County Council held on Nov. 29th it was decided to oppose the London Water Bill.

TYPICAL AND SEVERE CASE OF SPORADIC CRETINISM IN WHICH THE PATIENT MENSTRUATED REGULARLY.

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THE chief point of interest in this extremely well-marked case of sporadic cretinism is that the patient who was thirty-six years of age and measured exactly 36 in. in height had since the age of twenty-five years menstruated regularly every month. This is quite peculiar. I am not acquainted with any other case of typical and severe sporadic cretinism in which menstruation has occurred. The notes of the case are as follows.

The patient, aged thirty-six years, was first seen on Jan. 26th, 1895, and was again seen on Nov. 15th in the same year. Her stepmother stated that she had known the patient from the age of three years. She then had a somewhat peculiar look and vacant expression of countenance. Her birth had been unattended with difficulty. During infancy she had several attacks of bronchitis which were supposed to have retarded her development. She did not begin to walk until she was three years old and she had hardly grown in height since that time but had become very much broader. When she was seven years old the patient had an abscess on the outer part of the left leg. She had also twice had a glandular abscess of the neck; the last abscess occurred when she was sixteen years of age. She had never had any of the diseases peculiar to childhood, though she had been exposed to some of them. She had slept, for example, in a room with one of her sisters who was suffering from scarlet fever during the whole course of the disease but did not take it.

The family history of the patient showed that her mother had died at the age of thirty-one years from consumption and that her father had died at the age of fifty-four years from gangrene of the foot following rheumatism. There were six children in the family: (1) a female, now aged forty years, unmarried, and quite well and normal in every respect; (2) a male who died from phthisis at the age of twenty-eight years, a fine, tall man, 6 ft. in height, who had been in the Cameron Highlanders; (3) a female, aged thirty-eight years, married, well formed and of average height but not very strong; (4) a female who died a few months after birth; (5) the patient; and (6) a male who died a few months after birth while teething. There were also six stepbrothers and sisters; all were well developed and strong. No other case of sporadic cretinism or myxœdema had, so far as was known, occurred in the families of either the father or the mother.

The patient's present condition is typical of a marked degree of sporadic cretinism. Her height is exactly 36 in. and her body is very broad; the back is markedly curved in the lumbar region and the abdomen is very large and prominent. There is no umbilical hernia. The facial expression is highly characteristic. The face is swollen and full; the skin of the eyelids is translucent; the nose is squat and broad, pug-shaped; the ears are rather large; the mouth is large; the lower lip is pouting but the lips are not much swollen; the tongue is not protruded between the teeth and, though large, is not proportionately so large as one might expect; the teeth in the upper jaw are all wanting; and the palate is very broad and flat. The head is covered with a profusion of dark-brown hair which is very coarse. Up to the age of twenty-five years it was kept short as her head was scurfy and scaly. Since the patient began to menstruate the scalp had become much cleaner and the hair has been allowed to grow long. The anterior fontanelle is closed; the patient's stepmother says it was very late in closing but she does not remember the exact date at which it closed. The neck is very broad. Enormous fatty swellings are present above the clavicles. I have never seen these supra-clavicular swellings proportionately so large in any other case. There is also some fatty swelling in the anterior fold of the left axilla. The forearms are colossal and the tibiæ are somewhat bent n wards. The hands are enormously broad and large. I have not seen the hands proportionately so large in any other case. The fingers are very broad and flat and the feet are very broad and short. The hands and the feet easily become blue and cold. In complexion the patient is somewhat earthy-coloured. The skin generally is dark, dingy, brownish-yellow in colour, very dry, coarse, and harsh. She never perspires. She is worse in cold weather and her stepmother states that no matter how near the fire the patient gets she is always cold. Her appetite is small and she does not like sweets. The bowels act regularly and medicine is never required. Urination is natural. The nipples and areolæ are somewhat developed and there is a fulness in the position of the breasts. Since the age of twenty-five years the patient has menstruated every month; on one occasion (a year and a half ago) the discharge stopped for three months. There are no pubic hairs. She is naturally of a very cheerful disposition, fond of fun and company, but her intellectual development is that of a child of five or six years. She understands a great deal that is said to her, but her vocabulary is limited and she does not speak much. Before I knew that she was able to understand what was said to her I remarked that she was a comical little person, whereupon she immediately began to laugh. She told me that she was going to a wedding and that she was going to wear a blue dress. She is, it seems, very vain and fond of dress. She sleeps well—in fact, too well.

The following are the exact measurements: height, 36 in.; circumference of the abdomen at the level of the umbilicus, 24 in.; of the chest at the level of the nipples, 22 in.; of the neck over the thickest part of the glandular swellings, 19 in.; of the neck higher up, 14 in.; of the upper arm at the middle, 6¾ in.; of the forearm at the thickest part, 7¾ in.; of the hand, 9⅛ in.; length of the hand from the wrist to the tip of the middle finger, 4 in.; circumference of foot at the thickest part, 8 in.; and length of foot, 6 in.

I did my best to persuade the stepmother to allow the patient to come into the infirmary but she would not consent to this. I then tried to induce her to have the thyroid treatment carried out at home. She consulted with the patient's sister on this point but they both refused to have the treatment carried out. They said that they had known the patient so long in her present condition and were so much attached to her that they would not like to have her changed even for the better.

Edinburgh.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF DOUBLE EMPYEMA OF THE FRONTAL SINUS WITH ONE INFUNDIBULUM.

BY W. R. H. STEWART, F.R.C.S. EDIN.,
SURGEON TO THE EAR, THROAT, AND NOSE DEPARTMENT OF THE GREAT NORTHERN CENTRAL HOSPITAL; CONSULTING SURGEON TO THE LONDON THROAT HOSPITAL.

A PATIENT, twenty-nine years of age, consulted me about two years ago for stuffiness of the left side of the nose, with a discharge of some duration, and occasional severe frontal headache. Examination showed polypi with an abundant milky-white discharge on the left side. The right side was apparently normal. There was no bulging or disfigurement of the face. The radical operation was explained to the patient, who, however, would not have it done, preferring the milder mode of treatment. The polypi were therefore removed together with the anterior ends of the middle turbinates. A free discharge remained but all sense of stuffiness and headache disappeared. About eight months ago, however, she wished for the major operation as the discharge continued so profuse. All the symptoms pointing to unilateral disease, I operated through the brow incision with a small trephine. The bony septum between the sinuses was found to be situated well over to the left side and was complete with the exception of a small hole posteriorly through which pus was oozing. The septum was removed, but there was so much granulation tissue in the right sinus that I continued my incision down the ridge, across the top of

the nasal bones (taking care to avoid the spot where the spectacle frame might rest), and up the other ridge, and the flap was turned up. The bone was then chipped away with forceps until there was space enough to thoroughly clear out the right sinus. The reason why there was no discharge into the right side of the nose was then explained, for with the finest probe I could find no sign of an infundibulum on that side. The sinus discharged through the opening at the back of the septum into the left infundibulum. The usual funnel-shaped india-rubber tube was passed through this into the nose and the wound was closed. The patient did very well.

The points to be noticed in this case are—(1) the absence of the infundibulum on the right side which led me to believe that the right sinus was healthy and did not need interference, there being sufficient disease on the left side to cause all symptoms; and (2) the amount of room gained and the very small apparent scar left by the incision, which I have since employed with success in more than one case of double empyema.

Devonshire-street, W.

PHTHISIS WITH PECULIAR CARDIAC PHYSICAL SIGNS.

BY W. SOUTHWICK WILLMORE, M.R.C.S. ENG., L.R.C.P. LOND.

THE case of phthisis with peculiar cardiac physical signs reported by Dr. Hale White in THE LANCET of Nov. 19th, is of such interest that no apology is needed for recording an exactly similar case which came under my notice a few days ago.

The patient was a soldier and was under treatment in the Royal Victoria Hospital at Netley. He was twenty-seven years of age. When I first saw him a week before his death he was evidently in the last stage of phthisis, with extreme debility, emaciation, cough, and abundant expectoration. Examination showed that the right lung was extensively diseased from apex to base. There were evidences of considerable cavitation at the apex and of a moderate amount of fluid at the base. The left lung was also diseased but in much less degree, the apices only of both lobes giving morbid physical signs. On examination of the heart at first I could make out no impulse and, moreover, there was no cardiac dulness to the left of the sternum. In the usual situation of the apex the heart sounds were very faint, almost inaudible, but on tracing them to the right they became more audible and were of almost normal intensity in the fifth right intercostal space, 2¾ in. from the mid-sternal line; here also a feeble but perfectly distinct impulse could be felt. There was no visible pulsation in any part of the pericardium. The man's condition with distressing orthopnœa did not permit of a prolonged examination, but there was apparently an area of absolute cardiac dulness commencing above at the fourth intercostal space and extending to the right to within one inch of the vertical nipple line, although the pleural effusion and the consolidation of the lung made it very difficult to be sure of this.

My first impression was that the heart had been dragged over by fibrosis of the right lung and pleural adhesions but, considering that the duration of the disease had been only nine months, that there was no retraction of the chest-wall, and that the physical signs were in no way suggestive of pulmonary fibrosis, the case seemed impossible of explanation in this way, and my opinion was that it was a case of dextrocardia. I examined the patient's chest once again before his death and then noted no change in the physical signs. He died on Nov. 15th.

At the post-mortem examination it was found that the heart was of natural size and that it was in no way displaced from its normal position. The condition of the lungs was consistent with the physical signs elicited during life. There were several large cavities in the upper part of the right lung and the whole lung was diseased and partly consolidated, although not completely airless. There were about 15 oz. of fluid in the right chest. The anterior border of the left lung covered completely the anterior surface of the heart nearly to the mid-sternal line.

The intensity of the cardiac sounds in the fifth right interspace in this case, as in Dr. Hale White's case, can be readily explained by the fact that they were conducted through the consolidated lung and perhaps intensified by the proximity of large pneumonic cavities. The illusion was heightened by the absence of the normal left dulness. But why the abnormal impulse? There could be no doubt about it, and its presence was noted by several observers.

Netley.

NOTE ON A CASE OF QUARTAN AGUE IN NEW ZEALAND.

BY ROBERT H. BAKEWELL, M.D. ST. AND. & N. Z., LATE PHYSICIAN TO THE CHRISTCHURCH HOSPITAL, NEW ZEALAND.

THE patient was a woman, aged about forty-five years, who lived near a swamp, but with a hill between her residence and the swamp. For the last month she had been subject to frequent attacks of chills followed by heat and perspiration. From one of these attacks she was suffering when I was called in on August 19th at 8 P.M. The temperature was 101·6° F. and the pulse was about 100. It appeared on close questioning that these attacks occurred every four days—that is, one, say, on the Monday, the next on the Thursday, always with two clear days. The attacks commenced about 4 P.M. and lasted until the morning; they were accompanied by some headache, great lassitude, aching of the limbs, and the other symptoms of intermittent fever. I ordered 5 gr. of sulphate of quinia *statim*. The dose was to be repeated at 8 A.M. On calling the next morning at 10 I found that she had taken both doses; there had been no singing in the ears, the temperature had fallen to 96°, and she was ordered 10 gr. of quinine daily for two days more. In all she took 30 gr. This sufficed to stop the quartan, of which there was no recurrence, and produced no cinchonism—a sure sign that it was needed. The rarity of quartan ague must be great, as I have never seen a case for forty-seven years when I resided on the borders of the Essex marshes.

Auckland, New Zealand.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. THOMAS'S HOSPITAL.

A CASE OF RUPTURED INTESTINE WITHOUT ABDOMINAL WOUND; LAPAROTOMY; DEATH NEARLY A MONTH LATER.

(Under the care of Mr. W. H. BATTLE.)

RUPTURE of the intestine without any wound of the abdominal wall is probably not very rare yet the number of cases which have been recorded is by no means great. The amount of damage exhibited by the skin of the abdomen is no criterion of the severity of the injury inflicted on the subjacent viscera. The skin may show only a slight abrasion and yet rupture of the liver or the intestine may have occurred. In cases like these, where the wheel of a cart has passed over the abdomen or a severe kick from a horse has been received in the same region, the diagnosis is exceedingly difficult. If the bowel has been ruptured by what signs can it be known? Unfortunately no very definite answer is possible to this question. The great amount and persistence of the collapse may suggest that an injury greater than a mere contusion has been inflicted but it cannot be said that reliance can be placed on this. It was formerly maintained, and the view is still held by many, that absence of liver dulness always occurs in rupture of the stomach or intestine and that the presence of this physical sign is pathognomonic of this condition, but neither of these statements is absolutely true; it *usually* happens that a rupture of the intestine or of the stomach allows sufficient gas to escape

to cause the liver to drop away from the abdominal parietes so that a resonant note is obtained, but it is not always so, and, on the other hand, a highly distended bowel may encroach on the liver dulness. Persistence of the vomiting is a sign of some value, but it cannot be relied on. The diagnosis being so difficult it is natural that the decision as to the treatment to be adopted should be difficult also. In deciding on the treatment in a case in which the abdomen has received a blow or some similar injury two points have to be considered; the first is, do the severity and persistence of the symptoms point to some lesion greater than mere contusion? and the second point which must be considered is the severity of the blow. If this has been really great, as the passage of a heavy waggon or the kick of a horse, the severity of the blow in itself may justify an exploratory laparotomy. It is, of course, possible to open the abdomen and then to find that it has been unnecessary, but if due care has been exercised this is better than to find at the post-mortem examination that a lesion was present which could have been readily remedied. It is difficult to obtain trustworthy statistics as to the relative mortality between cases operated on and those in which no operation was performed, but it has been said that when cases are treated by systematic exploration after all severe injuries the mortality is 66 per cent., but that with the expectant treatment a death-rate of 97 per cent. is obtained,[1] but these figures are of little value. The following case has many points of interest and so far as the wound of the intestine went the treatment adopted was successful, though death occurred nearly four weeks after the injury. Some interesting cases of ruptured bowel have been recorded by T. Bryant;[2] in several of these the signs were extremely slight. Hitchcock,[3] W. H. Battle,[4] and J. Croft[5] have all published cases. At the last reference will be found a table of fourteen cases which have been recorded.

A man, aged twenty-seven years, was admitted into St. Thomas's Hospital during the evening of April 4th, 1898, having been, while crossing Whitehall when intoxicated, knocked down by a two-wheeled van, one wheel passing over the abdomen apparently below the umbilicus to judge from the abrasions. He was taken first to a hospital where they did not admit him. On admission at St. Thomas's Hospital he could give no clear account of the accident, but complained of pain in the abdomen and he had a slight scalp wound. The urine was drawn off by a catheter and was found to be free from blood. The temperature was normal and the pulse was fairly good. At 12 midnight after admission he commenced to vomit a clear fluid which smelt strongly of alcohol; the vomiting continued until 9 A.M. on the 5th, when he began to complain of pain over the abdomen which appeared very sensitive to touch and very resistant. There was no loss of liver dulness and no increase of dulness was present anywhere over the abdomen. The temperature was 100·6° F. In the afternoon (about twenty hours after the accident) the patient was anæsthetised with ether and an incision 5 in. long was made in the middle line through the umbilicus, and a large quantity of semi-purulent fluid escaped. The small intestine was turned out and found to be covered with flakes of lymph which easily peeled off. About 12 in. from the ileo-cæcal valve the bowel wall was discovered to be torn through; the tear was longitudinal and about three-eighths of an inch in length and was complete, the mucous membrane protruding. The tear was closed by means of 8 Lembert sutures of silk. The peritoneum was irrigated with hot sterile water and an opening was then made through the abdominal wall just above the pubes and a glass drainage tube was inserted. The first abdominal incision was then closed with salmon-gut sutures and dressed with cyanide gauze. The next evening (the 6th) the wound was dressed and a little slightly turbid fluid was removed through the drainage-tube with a pipette. The vomiting had continued although the patient was under the influence of morphia. Feeding was carried out by nutrient enemata. On the 7th the pulse was better but the vomiting still continued. A drachm of magnesium sulphate every hour was ordered but it was returned almost immediately. His temperature had not been above 99° since the evening of the 6th. On the 8th the patient began to feel better, his pulse was 62 per minute, and the temperature was normal. The drainage-tube was removed and a plug was inserted. He had had a great deal of hiccough but the vomiting gradually ceased. No food was given by the mouth. By the 9th he had very much improved and all vomiting and hiccough had ceased. A soap-and-water enema acted well and the patient felt more comfortable. He was given some Benger's food by the mouth and also a little milk and brandy, and no vomiting ensued. On the 10th he complained of pain in his back, but it was considered to be due to lying in bed. The bowels acted well and he took milk diet readily. He continued to improve and on the 12th the stitches were removed, but on the 14th the wound gaped and some bowel protruded, so the intestine was carefully washed and returned and the wound was resutured. On the 19th the temperature rose to 101·6°, but it subsided when a boric fomentation was applied to the wound. On the 22nd the temperature began once more to be irregular, rising at night, and on the 25th it reached 102·4°. The patient complained of much pain on the right side of the chest and on examination dulness at the back was discovered downwards from the level of the spine of the scapula; the dulness was not absolute and there was loss of breath sounds and of vocal fremitus. On the 26th an aspirating needle was introduced into the right side of the thorax posteriorly but failed to find any fluid. On the 28th, as the physical signs had not improved and as the evening temperature on the 27th had reached 103·4°, the patient was anæsthetised with chloroform and Mr. Battle tried with a trocar and cannula to find fluid in the right side of the chest, but as none was obtained an incision was made midway between the ninth and tenth ribs starting from the line of the anterior axillary fold and going forwards for about 4 in. and the pleural cavity was opened and a finger was inserted but nothing except what appeared to be solid lung could be detected. The incision was therefore continued forward in the same line over the abdomen and the peritoneum was opened just beneath the edge of the liver. A finger was introduced and felt what seemed to be some very soft recent adhesions among the coils of intestines but nothing else could be detected although the right kidney was easily felt. Over the upper surface of the liver nothing was felt and the finger easily reached the right coronary ligament. When one finger was put into the pleura and another into the abdomen nothing but diaphragm intervened between them. The wounds were sewn up and dressed. The patient's condition did not improve; he vomited after taking any liquid, his breathing was at the rate of 40 per minute, and his pulse was 160. There was no distension of the abdomen. He continued to grow worse on the 29th and he gradually sank, dying at 7 A.M. on the 30th.

Necropsy.—At the post-mortem examination which was made by Dr. H. W. G. Mackenzie a small amount of serum was found in the right pleura. The lower lobe of the right lung was quite collapsed and portions of it sank in water. In the abdomen there were adhesions here and there between the intestinal coils, but these were readily broken down and there was no evidence of recent peritonitis beyond this. There was a collection of pus amounting to an ounce or so in the pocket of the peritoneal cavity behind the right lobe of the liver. This was very near the second incision made on the right side of the chest and the abdomen. It lay about an inch or so behind it. The site of the former rupture of the gut was in the small intestine about 12 in. from the ileo-cæcal valve. Several sutures were attached to the outer aspect of the gut and readily came away as if they simply adhered to the surface. The opening was quite closed. The other organs all appeared to be normal.

Remarks by Mr. BATTLE.—The result of treatment in this case of ruptured intestine was very disappointing to all concerned. The operation was performed as soon as it could be after I had seen the patient. The rent in the gut was found and satisfactorily closed, whilst the peritoneum was thoroughly washed and cleansed from adherent lymph. A mild infection of the abdominal wound probably took place at the time and although it appeared to be firmly healed when the stitches were removed some abrupt movement caused the union to give and prolapse of bowel followed as described. This in turn gave rise to a secondary infection of the peritoneum and to the subdiaphragmatic abscess for which exploration proved unsuccessful. The general state of the patient was very difficult to manage. The accident occurred when he was under the influence of alcohol and he was addicted to it; moreover, he

[1] Balladur: Thèse de Paris, 1895.
[2] THE LANCET, Dec. 7th, 1895.
[3] Medical and Surgical Reporter, Philadelphia, Dec. 8th, 1894.
[4] THE LANCET, May 5th, 1894.
[5] Transactions of the Clinical Society of London, vol. xxi., p. 254, and vol. xxiii., p. 141

was of a headstrong disposition and impatient of control. On more than one occasion he got out of bed and it was only the skilful management of the house surgeon, Mr. John McClean, that carried him through the danger of the first four or five days. The difficulty attending the diagnosis of abdominal lesions directly after the infliction of the injury is again demonstrated by this case. All abdominal injuries should be admitted to hospital when they apply, and it cannot be too strongly emphasised that the most serious injury may be present without any apparent damage to the abdominal wall or any excessive shock. The diagnosis was very clear at the time I first saw the patient and I had no hesitation in preparing for immediate operation. In addition to the history of injury the abdominal pain was then very severe and the aspect of the patient indicated great anxiety. The vomiting which had been thought to have been possibly the result of drink continued and was frequent and distressing. Examination of the abdomen showed great rigidity of the abdominal wall and much tenderness. The percussion note was not impaired anywhere. As a rule there is, I should say, no dull area in cases of ruptured small intestine over the part affected by the injury unless there is associated with the ruptured gut a hæmorrhage from ruptured mesentery. If there were much contusion of the intestinal wall with hæmorrhage into it one could imagine some impairment of note, but it is not easy to understand how gut which has been paralysed by injury can produce a change in the percussion note sufficiently pronounced to be of use in the diagnosis of these lesions, though possibly this might be due to want of tone in the wall of the gut—compare the dull note obtained by slacking down a drum. French surgeons have expressed an opinion that it is little use operating for ruptured intestine if more than fifteen hours have passed since the injury, but it is to be hoped that this will not be accepted generally, otherwise we shall certainly lose cases which might have been saved. Dr. Wiggins successfully operated on a boy thirty-six hours after the injury.

ANCOATS HOSPITAL, MANCHESTER.

A CASE OF IRREDUCIBLE HERNIA; ADHESION OF INTESTINE, SEPARATION OF MESENTERY; RADICAL CURE; RECOVERY.

(Under the care of Mr. STANMORE BISHOP.)

THE special point of interest in the following case is the accidental separation of the mesentery from a portion of the small intestine. It is often stated that the bowel is liable to slough if this occurs and many instances of this serious result have been recorded,[1] but generally this happens only when the separation has been much more extensive than in the case recorded below.

A man, aged fifty-one years, was admitted into Ancoats Hospital on Jan. 10th, 1898. He was stout, flabby, and of rather coarse build; he had an irreducible scrotal hernia on the left side which he declared he had observed only for nine months; he had never worn a truss. After rest in bed for three days it became somewhat smaller but no attempt at reduction appeared to have any effect upon it. It was of about the size of a cricket ball and gave a clear note on percussion, apparently containing only intestine without any omentum. When the patient first noticed the swelling, about nine months before admission, it was of the size of a duck's egg, his attention being directed to it by some hypogastric pain. He had suffered from cough but he did not attribute the swelling to the coughing nor did he think it resulted from his employment, in which he had to lift heavy bags of coal. On Jan. 14th the operation for radical cure was performed. The veins of the spermatic cord were varicose, the cord itself being much thickened, elongated, and convoluted, but it was easily separable from the sac. On opening the latter a U-shaped coil of intestine was found; it was intimately adherent laterally; and while this adhesion was being separated by means of scissors it was found that the mesentery itself was being separated from the gut. The mistake was recognised almost immediately and the adhesions were then attacked nearer the neck of the sac and behind where a gap was found and from this point the work was easy. The bowel itself at the apex of the loop was shrunken and narrowed in calibre, looking indeed as though it had been compressed in the neck of the sac. At first resection of this portion was thought of, but the idea was rejected partly because the bowel retained its normal colour and gloss and partly because the patient showed signs of commencing collapse. The neck of the sac was divided upwards, the bowel was reduced, and the neck of the sac was tied, the remainder being cut away. The ring and canal were then sewn up by three mattress sutures, applied as Noble suggests, so as to draw the conjoined tendon behind Poupart's ligament, leaving only enough room for the passage of the cord. The wound was closed by horsehair sutures and sealed by celloidin. The patient was greatly collapsed on the same night and very sick, the vomiting lasting until the evening of the next day. The first motion was passed on the second day. Recovery was uneventful and the sutures were removed on the tenth day, the wound having healed by first intention. The patient was kept in bed for six weeks and left the hospital perfectly well on March 8th.

Remarks by Mr. STANMORE BISHOP.—This case indicates, I think, the amount of reliance which may be placed upon the anastomoses of vessels on the bowel wall, since in the process of separation several of the direct smaller supplying vessels were divided.

[1] Allingham: THE LANCET, May 5th, 1894.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Lesions of the Pineal Body.

A MEETING of this society was held on Dec. 6th, the President, Dr. PAYNE, being in the chair.

Dr. CYRIL OGLE exhibited two cases of Tumour of the Pineal Body. The first was a pigmented mixed-celled sarcoma about 1½ in. in diameter associated with melanotic sarcoma diffused all over the cortex of the cerebrum and invading brain substance along the fine vessels. The appearance of the brain was as if it had been painted with dark sepia or black lead. Dr. Ogle referred to instances of diffuse sarcoma in the pia mater described by Ziegler and to a similar appearance due to melanotic sarcoma depicted in Bramwell's book on "Intracranial Tumours." The other specimen was a mass about 1 in. in diameter, limited to the region of the pineal body but pressing on and causing atrophy of part of the optic thalami and corpora quadrigemina, the rest of the brain, including the pituitary body, being healthy. On microscopic examination it proved to be of complex character, partly composed of vascular tissue like hyperplasia of the normal pineal body, but also of collections of exceedingly large cells with vacuolated nuclei and of cystic spaces lined by cubical epithelium. The whole, perhaps, was to be regarded as alveolar sarcoma or endothelioma, with a tendency to revert to structures found in birds in the pineal body. The symptoms in this case included rapid blindness with dilated inactive pupils, no paralysis of the third nerve, but loss of the external movement of each eye. There was no other paralysis or loss of sensation, but there were staggering gait and stiffness of the muscles of the back, vomiting, and fits, great enlargement of the penis and almost continuous sleep for from five to six weeks or longer. Dr. Ogle referred to 8 other cases of pineal tumour, 2 being hyperplasia or glioma, the remainder each of a complex constitution, some containing hair, cartilage, and fat, others containing spaces lined by epithelium suggesting glandular tissue, most of them containing cysts and sarcoma tissue. Dr. Ogle pointed out that the pineal body developed as a hollow outgrowth of the fore brain, elaborated as in certain lizards, as shown by Baldwin Spencer, into a median eye of very perfect elements, but in mammalia remaining in a rudimentary or rather a degenerate condition as a solid body containing compartments filled with reticulum and cells, processes of which appear to form the reticulum. It had been suggested that the body might have nervous functions, its appearance being somewhat like that of the granular layer of certain parts of grey matter of cerebrum or cerebellum, but the appearance was more like that of masses of neuroglia. Dr. Ogle then considered whether the body had any metabolic function comparable to that of the pituitary or thyroid bodies, although not representing, as they do probably,

glandular, secretory, or excretory structures in earlier types of animals. He considered that it was fair to conclude that the symptoms in the uncomplicated case of pineal growth could be well explained by pressure on the corpora quadrigemina, hence the rapid blindness without choked disc, stiffness, staggering gait, loss of conjugate movement of eyeballs. But possibly the precocious development of penis might have some relation to disease of the pineal in the same way as pituitary tumour appeared to cause enlargement of the extremities, although apparently this was not borne out by the scanty clinical details of other cases. In the same way the excessive sleepiness, with perfect intellect when aroused, might be an effect of pineal disease. This was found in several of the other cases collected and was not readily explained.

Mr. T. W. P. LAWRENCE exhibited a specimen of Glioma of the Pineal Body. The organ was slightly enlarged, circular in outline, and compressed from above downwards. It measured 14 mm. in diameter and 7 mm. in thickness, and showed slight signs of lobulation on its surface. Histologically the tumour consisted of a dense reticulum of delicate fibrils with scattered cells of small size, scanty protoplasm, and of round or triangular type. A large proportion of the tumour had undergone degeneration and consisted of granular material. The substance of the pineal body was disposed as a narrow zone at the periphery of the new growth and was divided up into distinct areas by the latter. The pineal body was free from adhesion to surrounding parts. The specimen was taken from a boy, aged sixteen years, who was under the care of Dr. Bradford at University College Hospital. The patient died from tuberculous meningitis of ten days' duration; his previous history was good and he had been free from illnesses, and there were no symptoms referable to the presence of the enlarged pineal body.

Mr. J. R. LUNN exhibited a specimen of Syphilitic Hypertrophy of the Pineal Body which was found post mortem in the brain of a demented female epileptic who had been in an asylum for ten years. She had had marked symptoms of acquired syphilis and ultimately died from tuberculosis. She had left hemiplegia and frequent fits, but owing to her mental condition accurate investigation of her symptoms was difficult. At the necropsy the pineal body was found greatly hypertrophied, it being affected with fibrosis evidently of a syphilitic nature. There were also two gummata in the brain, one in the tip of the left occipital lobe and the other in the right Rolandic region.

Dr. A. E. RUSSELL showed a Cyst of the Pineal Body found in the body of a man, aged twenty-three years, who was admitted into St. Thomas's Hospital comatose suffering from fracture of the base of the skull the result of an accident. The pineal body was found to be distended by a thin-walled cyst containing clear albuminous fluid. No other lesion was found. Careful inquiry from his friends failed to discover that he had shown any symptoms during life.

Mr. S. G. SHATTOCK showed an exactly similar cyst from the Museum of the Royal College of Surgeons of England. The history of the specimen was not known.

Dr. A. W. CAMPBELL (Rainhill) exhibited two specimens of Dilatation of the Central Canal of the Pineal Body. The first case was that of a female epileptic, aged thirty-three years, who died from phthisis. The only marked intracranial lesion was enlargement of the pineal body, 13 mm. in length, 10 mm. in width, and 8 mm. in depth, with a cyst-like dilatation of its central cavity, the contents being a glairy, brownish fluid. The wall of the cyst was composed of two layers; the outer was composed of normal pineal tissue, the inner stained indistinctly and contained several large, pale, or faintly granular cells, the nature of which was not evident. There were also scattered cells containing brown pigment. At the posterior part of the cyst these pigmented cells were arranged in a definite stratum. Possibly these might be hæmatoidin collections, but it was also possible that they were pigmented cells analogous to those found in the choroid and retina, and would confirm the view that the pineal body was a rudimentary organ of sight, and would also explain the origin of a primary melanotic sarcoma in that body. The second specimen was also taken from an epileptic female and was similar except that the dilatation was greater. Unfortunately no microscopic examination was made.

Dr. GARROD showed a specimen of Cyst of the Pineal Gland taken from the body of a boy, aged sixteen years, who died from diabetes. The necropsy was made thirty-five hours after death. The pineal body contained a small cyst cavity of the size of a pea with smooth walls. It contained no hæmatoidin crystals. The fourth ventricle appeared to be quite natural and no other cysts were found in the brain. The pancreas was small and was found on microscopic examination to be markedly fibrotic. The liver and kidneys were fatty. It was probable that the cyst was of the same nature as those shown by Dr. Russell and Dr. Campbell.

Dr. VOELCKER showed a specimen of a Pineal Body in which there was a calcareous deposit. There was a similar deposit in the choroid plexus on each side and extensive calcareous degeneration in the arterial walls. There were no symptoms during life pointing to an intracranial lesion.

The PRESIDENT remarked that the pathological importance of the organ was evidently small, as was to be expected from the fact that in the higher animals it seemed to be of a merely rudimentary character. As Dr. Ogle had pointed out, it was recognised as having been (far back in the scale) an eye, but that must date back to the time when the tissues were transparent. After opaque substances began to be deposited in the tissues a central eye would become useless unless brought up to the top of the head, as in certain reptiles. Cyst formation, such as had been illustrated, was characteristic of rudimentary bodies. The occurrence of pigment was interesting as in the early days of the organ there must normally have been pigment present. The cases quoted had shown that the symptoms were those of mechanical pressure on adjacent parts and did not at all suggest that the pineal body had any functions analogous to those of the pituitary body in forming sub stances which entered the blood.

ULSTER MEDICAL SOCIETY.

Ulceration following Scarlet Fever.—Laryngeal Diphtheria.—Classification of the Colon Group of Micro-organisms.

A MEETING of this society was held on Dec. 1st, Dr. NELSON, President, being in the chair.

Dr. T. S. KIRK showed a child with extensive Ulceration following Scarlet Fever and producing a curious deformity of one foot, the toes being covered by a fold of skin. A radiogram was exhibited of the deformity.

Dr. A. B. MITCHELL read a paper on the Influence of Antitoxin on the Mortality of Tracheotomy for Laryngeal Diphtheria, with special reference to the results of operation in Ulster. Attention was first drawn to the prevalence of diphtheria in the north of Ireland, this being illustrated by a mortality of 3402 from this disease in Ulster during the past twenty years, while during the same period in all the rest of Ireland the deaths from the same cause were only 3320. The annual death-rate per 100,000 in Belfast and the surrounding district was 14, while a similar rate for Dublin was only 7. The beneficial effect of antitoxin in the treatment of diphtheria and the consequent reduction in the mortality from this disease was referred to and it was then pointed out that the benefits to be derived from its use were still more striking in those cases where tracheotomy became necessary. The recovery rate after tracheotomy in the hospitals under the Metropolitan Asylums Board, which was 28 per cent. without antitoxin, had risen to 63 per cent. since the introduction of the serum. For years there had been a firm conviction in the minds of the profession in Ulster that tracheotomy in diphtheria offered no reasonable prospect of saving life and it was therefore only performed on rare occasions and, indeed, rarely recommended. Dr. Mitchell communicated with the leading surgeons throughout the province of Ulster and succeeded in collecting a series of 82 operations performed for this disease previously to the introduction of antitoxin. Of these only 6 recovered, equal to a recovery-rate of 7·3 per cent., a record sufficiently gloomy to justify the feeling of the profession in regard to it. A similar list since the introduction of antitoxin yielded a total of 20 operations with 15 recoveries, equal to a recovery-rate of 75 per cent. Though the number of cases was comparatively small it was contended that the figures were convincing and the attitude of the profession in the North of Ireland towards tracheotomy must be reconsidered. The value of artificial respiration after the trachea had been opened in those cases in which respiration had suddenly been suspended was particularly insisted upon, and records were

given of cases in which this measure had resulted in a restoration of vitality in what appeared to be a death-sleep. The value of intubation as compared with tracheotomy was discussed and the former operation was condemned in diphtheria: (1) as being likely to force any pieces of loose membrane down into the trachea with the risk of instant suffocation; (2) as giving rise to great difficulty in feeding; (3) as liable to cause ulceration of the swollen vocal cords with permanent impairment of function; (4) because it did not afford such free exit for pieces of membrane, tracheal secretion, &c.; and (5) if coughed up the nurse was totally unable to replace the tube. Finally, the necessity for prompt administration of antitoxin in all suspicious cases was urged, this being calculated greatly to diminish the number of cases likely to require operation at all.—The discussion was carried on by Professor SINCLAIR who thoroughly agreed with Dr. Mitchell in his opinion of the improved prospects of operation, in the value of artificial respiration in special cases, and in condemning intubation as unsatisfactory in the disease under consideration.—Dr. DARLING (Lurgan), Dr. CALWELL, Dr. KIRK, Dr. DEMPSEY, Dr. KILLEN, Dr. ROBERT CAMPBELL, Dr. TENNANT, and the PRESIDENT also took part in the interesting discussion.

Dr. J. LORRAIN SMITH and Dr. TENNANT made a communication on the Classification of the Colon Group of Micro-organisms.

BOMBAY MEDICAL UNION.—Three meetings were held during the month of November, to consider the present position of the Plague Prophylactic Inoculation of Professor W. M. Haffkine, under the presidency of the Hon. Dr. Bhatchunder Krishna. About fifty local medical men took part in the discussion. The following propositions and amendments were put before the meeting.—Proposed by the Hon. Dr. Bhatchunder Krishna and seconded by Mr. D. S. Shroff: "1. That this meeting is of opinion that, considering the data now available and the satisfactory results of the observations collected regarding the protective effect of Professor Haffkine's plague prophylactic, the time has now arrived for the profession to make a definite pronouncement on the subject and to invite the public to resort freely to the protective treatment, a very reliable safeguard against plague. 2. The immunity derived from inoculation when done with a full dose appears to last for at least six months, but there is the possibility of its lasting much longer. 3. From the observations collected it appears that a second inoculation done ten days or so after the first further reduces the incidence of plague in those who resort to inoculation, and a third, if such be practicable, would increase the immunity still further. The public are therefore to be invited to resort to at least two inoculations and even to a third if practicable. The duration of protection is also likely to be enhanced by such a repetition. 4. This meeting of medical men, who have had a wide experience of inoculation on persons of all positions, ages, and conditions, declares emphatically that rumours of inoculation originating different diseases, such as leprosy, syphilis, &c., are devoid of any foundation; that considering the nature of the prophylactic which does not contain any living germs such an eventuality is absolutely impossible; and that there are no facts to show that inoculation aggravates any existing ailments despite of rare and isolated instances which may at first suggest such an idea."—The following amendments were proposed by Dr. M. G. Deshmukh and seconded by Dr. G. B. Kher: "1. That in the absence of any series of experiments showing (*a*) that the apparently dead organisms contained in the prophylactic serum are incapable of growth in the bodies of animals as well as in men and (*b*) that the introduction of living germs of the disease in the inoculated animals does not only fail to produce any symptoms of the disease but that the germs do not at all grow there but are speedily destroyed—i.e., the immunity conferred on the animals is not only of the antitoxic kind but is powerfully anti-microbic—it is not possible to say that the general adoption of Professor Haffkine's anti-plague inoculation as a measure to combat plague epidemic is free from evil events. 2. In the absence of statistics of plague mortality among the inoculated and uninoculated sections of communities, giving full details regarding the age, sex, race, social position, and such other factors as confer natural immunity on individuals against a disease, no opinion can be expressed as to what degree of immunity is obtainable from inoculation."—Proposed by Dr. Nadershaw H. E. Sukhia and seconded by Dr. Khaja Abdule: "That in giving due and fair consideration to both sides of the question of the prophylactic effect of Professor Haffkine's anti-plague preparation, this meeting is of opinion that it is premature to pronounce definitely at this stage as to its harmlessness and efficacy or otherwise."—At the last meeting, held on Nov. 8th, on a division being taken, the amendments were thrown out, only 4 votes being given in their favour, whilst the original proposition was carried, the proposers and seconders of the two amendments alone voting against it. It was also resolved that the resolution passed by the meeting in favour of inoculation should be communicated to the public, the municipality, and the Government.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—A clinical meeting of this society was held in the society's rooms at the West London Hospital on Dec. 2nd, Dr. S. D. Clippingdale, President being in the chair.—Dr. J. B. Ball showed:—1. A case of "Black Tongue" in a girl, aged four years. The dark surface occupied an area in front of the circumvallate papillæ measuring about ¾ in. across and 1½ in. from before backwards, the anterior part and edges of the tongue being free. The characteristic hypertrophy of the filiform papillæ was well marked. The condition had been present for two months and had caused no trouble. 2. A case of Rheumatoid Arthritis in a boy, aged ten years. The disease had followed influenza two years previously with pains in the arms and legs and since that time there had been repeated attacks of pain and swelling of the joints together with fever. Certain joints now remained persistently enlarged between the attacks. The glands of the axillæ and groins were enlarged; there was no splenic enlargement.—The cases were discussed by Mr. McAdam Eccles, Dr. Bennett, and the President.—Dr. P. Abraham showed:—1. A case of Psoriasis in a girl, aged five years. The thumb became painful and the nail was lost a year ago; recently most of the other terminal phalanges had become affected. 2. A case of Lichen Ruber Acuminatus. The disease first appeared a year previously on the thighs, back, and abdomen. When the case was first seen in July, 1898, the rash had the appearance of a very red papular eczema. Pruritus had been a marked feature of the case.—These cases were discussed by Dr. Whitfield.—Dr. Alderson showed a case of recovery following Cirrhosis of the Liver. The patient had been tapped several times for ascites. Since the last tapping, more than a year previously, there had been no return of the ascites and the patient was able to do his work.—The case was discussed by Dr. Travers, Dr. Chapman, Dr. Caley, Mr. Bidwell, and Mr. McAdam Eccles.—Mr. McAdam Eccles showed:—1. A case of Submaxillary Cyst in a woman, aged thirty-nine years. The patient first noticed a swelling of the left submaxillary region two years previously. There had been no pain and the swelling had apparently remained of the same size. 2. A case of Swelling in the Region of the Parotid which had lasted for two years. There were no other swellings in the neck; the patient had several bad teeth.—These cases were discussed by Mr. R. Lloyd and Mr. Bidwell.—Mr. Keetley showed a case of Comminuted Fracture of the Olecranon which had been treated by wiring. At the time of the operation a considerable fragment of bone was found loose and had to be removed. Nevertheless the result was excellent and movement of the joint was practically unimpaired.—Observations on this case were made by Mr. McAdam Eccles.—Dr. Whitfield showed a case of Pityriasis Rubra in a man, aged forty-eight years. The disease had lasted for ten years.—Remarks were made on this case by Dr. Abraham.

ÆSCULAPIAN SOCIETY OF LONDON.—A meeting of this society was held on Dec. 2nd, the President, Mr. D. H. Goodsall, being in the chair. Mr. F. Hewitt Oliver showed:—1. A specimen of Extensive Necrosis of the Horizontal Rami of the Inferior Maxilla due to yellow phosphorus fumes from a man, aged twenty-eight years. The second bicuspid was absent and the third molar was carious on the left side. Suppuration extended from the cerebral base to the clavicle and was deeply burrowing. The spleen was large and soft and the other viscera were macroscopically healthy. 2. A specimen of Uterine Fibroids removed post mortem from a woman, aged eighty-seven years, of the size of three large fists, yet beyond their weight they produced no symptoms. Parts of the tumour were far advanced in calcareous degeneration.—Dr. Arthur Davies showed two cases of Myxœdema. One was a man who

had been under treatment since December, 1891, by thyroid extract, of which he takes now 0·3 gramme twice weekly. His condition is good and the alteration is very great. The other was a woman who had previously had a two years' course of thyroid treatment, but having left that off for nineteen months she had relapsed. Dr. Davies made some observations on the disease and treatment.—Mr. Reginald Brown read notes of a case of Acute Relapsing Idiopathic Neuralgia in a woman, aged thirty-five years, of no occupation, who after years of domestic anxiety developed pain in the teeth of the right superior maxilla in October, 1896, which soon extended to both sides of both jaws. All the teeth were removed with some benefit after drugs had failed. In October, 1897, the pain returned and was unrelieved by drugs so a neurectomy of the right inferior dental nerve was performed with relief from pain till February, 1898, when there was return in the left lower jaw and again drugs failed so neurectomy of the left inferior dental nerve was done when pain ceased for three months. In July pain began insidiously in the depth of the superior maxilla. Voltaic and Faradaic electricity was then used, which increased the pain. Weir-Mitchell treatment for six weeks failed to relieve the pain and weight was lost. Bromide and chloral hydrate taken nightly induced sleep for two or three hours only. Subsequently about 5 cm. of the infraorbital nerve had been removed. The case is still under treatment.—Dr. G. Denton showed a specimen of a Gall-bladder full of Gall-stones from a man, aged sixty-eight years, which gave rise to no symptoms.

KIDDERMINSTER MEDICAL SOCIETY.—A meeting of this society was held on Nov. 25th, Mr. E. H. Addenbrooke, President, being in the chair.—Mr. J. L. Stretton mentioned the case of a woman, aged forty years, upon whom he had performed Cæsarean Section. She was admitted in September with extensive malignant disease of the cervix and vagina and was at the time about six months pregnant. The operation was performed on Nov. 7th. She made an uneventful recovery and the infant, which weighed 4½ lb., is also doing well. It was remarkable that there was no suppuration in view of the extensive disease and the very fœtid vaginal discharge.—Mr. Stretton also showed a Rectum removed from a woman aged sixty-one years. She had suffered from symptoms for eight months and the operation was performed on July 12th. About 4 inches of bowel were removed and as the growth did not involve the sphincter the greater part of it was left and the bowel brought down and sutured to it. The bowels moved consciously on the eighth day. The stitches were removed on the twelfth day. On August 13th she was discharged cured. The bowels acted regularly and were under control. On Nov. 25th Mr. A. C. Oldham, who had charge of her, informed Mr. Stretton that she had full control of her motions. There was no contraction of the anus and no recurrence of the disease. This result demonstrates the advantage, in some cases at any rate, of suturing the bowel to the external sphincter.—Mr. Stretton also showed a man upon whom he had operated for Strangulated Hernia, read notes of a case of Strangulated Hernia in an aged female, and showed forty-two Gall-stones removed from a female patient.—Mr. Oliphant showed for Mr. Hodgson Moore a man from whose knee-joint a foreign body had been removed. It was a small piece of the articular surface, cartilage and bone, of the lower end of the femur which had been chipped off as the result of an accident. The man recovered without any bad symptoms and the joint is freely moveable.—Mr. W. Miles mentioned the case of a woman with a tumour in her side which resembled a moveable kidney, so much so that the surgeon who was consulted made an incision in the loin, but the tumour turned out to be a portion of the right lobe of the liver with a dilated gall-bladder attached.

ILFORD MEDICAL SOCIETY.—At a meeting of this society held on Dec. 1st Mr. P. J. Drought read a paper on the X Rays and gave several practical hints upon how to obtain the best results. He showed two excellent skiagrams which he had recently taken—one of a bullet in the wrist, the other of a bullet in the head. He was indebted to Mr. Stocker for having kindly placed these patients at his disposal and pointed out a difficulty encountered in producing the skiagram of the bullet in the head—viz., having seen a skiagram of this case in which the lead was not clearly defined, and which was also minus a nose, he brought his photographic knowledge into use and so placed the patient in a position which enabled him to view the bullet upon the screen; then moving the head slowly backwards and forwards in front of the focus tube he observed that the bullet which was lying beneath the malar bone became more sharply defined in some positions than in others, and, moreover, a fragment of lead which was embedded close to the temporo-maxillary articulation was at times visible and at times not, although the head had only been moved an inch at most backwards and forwards. In other words, he did exactly what the photographer does with his camera, he focussed the bullet and fragment upon the screen and having found the position which gave the results—i.e., showed both pieces of lead at the same time—he slipped the sensitised plate into the position previously held by the screen, fixed the patient's head, and so obtained an excellent skiagram, which in this particular case he could not have accomplished had he taken a haphazard skiagram of the head.—A vote of thanks, which was carried unanimously, terminated the meeting.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.—The third meeting of this society was held at the Royal Kent Dispensary, Greenwich-road, S.E., on Dec. 2nd, Dr. Morgan Dockrell, President, being in the chair. Several new members having been elected, Dr. A. E. Sansom delivered the Purvis Oration on "Some Practical Points in the Treatment of Heart Disease," which is printed in full on page 1536.—A vote of thanks to Dr. Sansom was proposed by the President, supported by Mr. Prior Purvis, and carried.—Afterwards a largely attended conversazione was held, over 70 members and guests being present.—Mr. Thomas Moore gave a practical demonstration on the working of the Roentgen rays, being assisted by Dr. Pepperdene and Mr. Ernest Payne, the former of whom also showed a Wydt-Rocheford coil.—Among the exhibits in the screen room were: Fracture of the Patella twenty-five years ago (upper fragment drawn up 8 inches; Fractured Arm; Rabbit in Bag; Bird in Cage; Ribs, Hands, Arms, Heart, Diaphragm, Legs, &c.—Mr. Cooper had charge of a room in which a number of beautiful Fluorescent Tubes, lent by Dr. Pepperdene, were exhibited. These included tubes showing many different fluorescing effects in varied vacua and others showing the spectra of the new gases helion and argon.—Mr. Leslie Miller lent an Apparatus for Demonstrating Wireless Telegraphy.—Over 200 Radiographs were exhibited by Mr. Moore, Mr. Poland, Mr. Payne, and Mr. Webster. — Mr. Ernest Clarke showed a number of interesting microscopic specimens and Messrs. Maw, Son, and Thompson gave an exhibition of Surgical Instruments and Appliances. — A feature of the decorations was a beautiful collection of Australian ferns, kindly lent for the occasion by Dr. Sansom.

Reviews and Notices of Books.

A Clinical Treatise on Diseases of the Breast. By A. MARMADUKE SHEILD, M.B. Cantab., F.R.C.S. Eng., Senior Assistant Surgeon and Lecturer on Practical Surgery to St. George's Hospital; late Assistant Surgeon, Aural Surgeon, and Lecturer on Operative Surgery to Charing-cross Hospital, &c. London; Macmillan and Co. 1898. 8vo. Pp. 510. Price 15*s.* net.

THERE are few parts of the body the diseases of which present more difficulties to the practitioner and the student than the breast and this is in great part due to the fact that the pathological aspect of many of the morbid conditions occurring in this organ has been allowed to overshadow the clinical, and therefore we welcome all the more gladly a work in which the clinical view of the diseases of the breast has been steadfastly kept to the fore, and though, as we shall see, the pathological problems which present themselves have not by any means been neglected, yet the diagnosis and treatment have been accorded distinctly the first place.

The material on which this work has been based has been drawn from Addenbrooke's Hospital, Cambridge, and other public institutions with which the author has been connected, but especially from a study of all the cases of disease of the breast which were admitted into

St. George's Hospital in the thirty years between 1865 and 1895. A valuable feature, which, however, may easily be carried to excess, is the inclusion of the notes of many illustrative cases. This adds much to the interest of the volume and cannot fail to impress upon the reader important clinical facts. The author while recording the views of others never hesitates to express his own opinion, especially in regard to treatment. The description of the development of the breast with which the volume commences is in a clinical work of necessity brief, but the chief points are touched upon. Creighton's opinion that the mamma is mesoblastic in origin nowadays receives no support, but of course this only applies to the secretory epithelium, and it is going too far to say that anyone claims that the mesoblast has no share in the development of the breast, for the fat, the vessels, and the fibrous tissue of the organ are indisputably mesoblastic. The histology of the breast is well described and is illustrated by four microscopic sections showing the structure at various ages and under different conditions. In the description of the mode of formation of milk the author says: "As the milk contains volatile substances and salts it can hardly be entirely formed by cellular disintegration but rather after the manner of sweat from the flattened cells on the walls of the acini." We must confess that we cannot see why volatile substances and salts should not be formed by cellular disintegration. Mr. Sheild has carefully looked for the cavernous tissue which has been described as existing in the nipple but he has been unable to find any trace of it, even after examining many specimens, and he ascribes the erection of the nipple under cold and mechanical stimuli to the contraction of the unstriped muscle fibres which are present. An interesting account of hypertrophy of the breast is given and it is pointed out that it is decidedly rare and that mistakes in diagnosis are often made. A girl with a very large breast was shown at the Fellowship examination of the Royal College of Surgeons of England a few years ago as an example of hypertrophy, but when the removal of the breast was attempted the enlargement was found to be due to a huge lobulated fibro-adenoma. One great point in the diagnosis of these cases is that in true hypertrophy the enlargement is nearly always bilateral. Elephantiasis also of the breast occurs and simulates hypertrophy and the author refers to several cases which have been recorded. In the treatment of hypertrophy Mr. Sheild urges that the milder measures, such as the recumbent position, elevation, and pressure, a dry and spare diet, with the administration of the iodides of potassium and sodium, should be given a fair trial before the surgeon resorts to amputation, and he quotes a very interesting case in which much benefit resulted from treatment on these lines. If we except malignant growths it may be said with truth that there is no disease of the breast of more importance than abscess, and for the whole account of this condition in this book we have nothing but praise. The author holds firmly to the view which is daily being more widely accepted that infection from the nipple is the sole exciting cause of mammary abscess and he tells us that he has never seen a case of acute mammary abscess in a young woman without having been able to observe, by the aid of a lens, breaches of surface in the vicinity of the nipple by which organisms might readily enter the lymphatic channels. Many of the cracks are so minute that without the use of a hand lens they will easily escape notice. The statistics collected show that after parturition abscess of the breast is most common between the fourth and eighth weeks and again towards the fifth month. The author says that abscess of the breast in connexion with lactation is largely preventable, and he bases his opinion on the results obtained in lying-in hospitals where, as he shows, care is taken to cleanse the nipple and the child's mouth, and cracks and fissures of the nipple are treated antiseptically. In the treatment of mammary abscess after it has formed Mr. Sheild holds that the ordinary anterior incision is seldom sufficient to ensure proper drainage and he advises a more thorough and elaborate method. "As soon as elasticity and deep fluctuation are evident an incision is made radiating from the nipple just large enough to admit the index finger of the operator, and this is deepened until pus flows. The finger is now passed into the cavity and in the vast majority of cases it will be found that the end of the digit may be brought fairly near the surface in a dependent position, and this is generally at the thoraco-mammary junction. In this situation it may especially be noted that scars are afterwards hidden from view." The breast being well raised a free opening is made, and in this way dependent drainage and a hidden scar are obtained. The anterior incision is carefully sutured with fine horsehair and painted with collodion, so that it leaves a very slight scar. We heartily agree with the author that for hæmorrhage after opening a mammary abscess no styptic can be worse than the perchloride of iron; turpentine is cleanly and efficient.

Chronic mastitis has always presented great difficulties in diagnosis and the directions given will prove of assistance in this matter. As to the treatment of this condition Mr. Sheild advises the persevering application of anodynes locally, with the internal administration of iron, arsenic, quinine, and general tonic remedies in those under thirty years of age, but for elderly patients in whom the disease resists pressure and mercurials he recommends the removal of the whole breast. The author looks upon Paget's disease of the nipple as a malignant papillary dermatitis and considers that it should be carefully distinguished from epithelioma of the nipple. He thinks, and we agree with him, that those cases in which recovery from a so-called Paget's disease has resulted from simple local applications were probably not cases of this disease at all, but examples of an ordinary eczema affecting the nipple and its neighbourhood. He hesitates to pronounce the peculiar bodies which can be seen in this condition to be psorosperms, but acknowledges that their presence is a sure proof that the case is one of Paget's disease. As to treatment, he advises that in all cases as soon as the diagnosis is certain the breast should be completely removed.

The study of tumours of the breast has been burdened by a most needless and extensive nomenclature, so that it is difficult to know what conditions the several terms denote. Mr. Sheild has wisely endeavoured to steer clear of these ambiguities and his classification is simple but sufficient. Putting aside the unimportant growths such as lipoma, chondroma, and osteoma, he divides the remainder into the three large groups of fibro-adenoma, sarcoma, and carcinoma. He rightly insists that both the pure fibroma and the pure adenoma are rare and that of non-malignant new growths the fibro-adenoma is certainly the most common. Statistics are quoted which conclusively show that the fibro-adenoma is much more frequently met with before forty years of age than after. Of 63 cases 45 occurred before forty years of age and 18 after. Recurrence may occur after the removal of a fibro-adenoma but the fresh tumours are to be looked upon not as examples of true recurrence but rather as due to the enlargement of smaller tumours which were already there.

True sarcomata of the breast are so rare that we need hardly say anything concerning Mr. Sheild's account of this disease except that we are glad to see that he mentions the possibility of a rise of temperature in cases of sarcoma. This fact is only too often forgotten. With regard to the lymphatic glands Mr. Sheild shows that they are by no means rarely affected in cases of sarcoma.

Two hundred pages are devoted to the subject of carcinoma of the breast and this is only in accordance with the importance of the subject. With regard to the relative frequency

of the disease in men and in women the statistics quoted show that it may fairly be said that 100 cases occur in females for every one that occurs in a male. The question of etiology is fully discussed and the author arrives at the conclusion that no certain statement can be made as to any connexion of carcinoma with parasitic microbes, but that there are certain indications in that direction. With regard to the results of modern treatment it is satisfactory to learn that there has been a distinct and steady decrease in the mortality after the operation of amputation of the breast. At St. George's Hospital in the "sixties" out of the first 100 cases 90 were operated on and 9 died from various septic causes; in the second 100, 88 were operated on and 4 died from septic diseases; in the third 100, 88 were operated on and 2 died, 1 from pneumonia and the other from erysipelas; and in the fourth 100, 97 cases were submitted to operation and 1 died from congestive pneumonia and another from sepsis.

We are pleased to see that Mr. Sheild advises that the operation of removal should not be performed with the knife which has been used to incise the tumour, for without laying too much stress on the evidence in favour of the parasitic origin of carcinoma, yet it is clearly undesirable to run any risk of infecting the healthy tissue through which the incisions for removal should pass. In all cases the author clears the axilla, and this is the usual modern practice even when no enlarged glands can be felt.

As to the final results it can hardly be said that cases are "cured," yet undoubtedly many patients survive the operation several years, and instances are quoted in which thirteen years have elapsed without recurrence. Mr. Sheild advises repeated operation in cases of recurrence unless secondary growths are manifest.

An appendix on diseases of the breast in the male concludes the volume.

The index is good and the employment of two varieties of type in it enables the reader to distinguish readily between the names of authors quoted and the diseases dealt with. The illustrations are excellent, both the coloured and the plain. The book may be confidently recommended to all who want a readable, trustworthy treatise on the diseases of the breast.

A Handbook of Hygiene and Sanitary Science. By GEORGE WILSON, M.A. Aberd., M.D., LL.D., F.R.S. Edin., D.P.H. Camb. Eighth edition. London: J. & A. Churchill. 1898. Price 12*s.* 6*d.*

THE fact that this work has reached an eighth edition is a sufficient indication of its popularity, and although since the book was first published numerous others, covering somewhat the same ground, have appeared, there has also developed amongst the profession and the public such a demand for books of this nature that a ready sale may safely be predicted for the eighth edition of "Wilson's Hygiene." The present edition has expanded considerably in bulk, much additional matter having been inserted and some sections entirely rewritten. For instance, in the chapter on Food a summary of milk-borne epidemics is given, and a discussion entered into as to bovine scarlet fever and diphtheria, while in relation to the filtration of water reference is made to the Massachusetts experiments and to Koch's work in the same direction. In the section on Sewage Treatment attention is devoted to recent biological methods without in any way encroaching on the description of the older systems of precipitation and filtration. The chapter on Infectious and Parasitic Diseases has been very materially expanded and the author's discussion of antirabic inoculation and serum therapy is calculated to make the readers of the work think out the whole matter for themselves. With the evidence as to the value of antirabic inoculation Dr. Wilson is far from satisfied, and although he seems to attach hardly sufficient importance to the value of control experiments in this connexion he furnishes some very plausible reasons for the views which he holds. The author is, too, by no means convinced as to the good effects of the antitoxin treatment of diphtheria; but we cannot say that we altogether follow his reasoning here, nor do we think that he attaches due importance to the remarkable results obtained in dealing by means of antitoxin with the extremely fatal form of this disease known as "post-scarlatinal diphtheria." Dr. Wilson is evidently inclined to the view that the deductions of the bacteriologists should be received with more scepticism by the profession, and he points to the enthusiasm with which the tuberculin treatment of phthisis was hailed as an illustration of what disappointment may follow from a too blind acceptance of the dicta of the bacteriologist. In the preface to the present edition the author observes: "From the point of view of practical sanitation I also venture to assert that the trend of microbial investigations has of late years threatened to ignore or minimise the influences of those conditions of environment without which many pathogenic organisms are powerless for mischief," and it is in this spirit that much of the chapter on micro-pathology is conceived. The section on Sanitary Laws and the Duties of Sanitary Officers is very comprehensive, including as it does the sanitary powers of county and parish councils, and the appendix contains useful memoranda and formulæ. Although the book is, by virtue of the multiplicity of subjects touched upon, of a somewhat impressionist character, a reader who peruses it with his critical faculty fully alive cannot fail to derive much useful information. But the student will do well to bear in mind that some of the views expressed in the chapter on Antirabic Vaccination and Serum-therapy are not those which find general acceptance amongst all pathologists at the present time. In some parts of the volume there is evidence of somewhat hasty revision, while in other parts it is not quite clear that the author has altogether assimilated some of the more modern reports to which he makes reference. The report made for the Royal Commission on Vaccination on small-pox in Gloucester is attributed not to Dr. Sidney Coupland, the author of it, but to Dr. Copeman, and the London Life Tables are put down to "Shirley," when obviously "Murphy" is intended. Other instances of hasty revision could easily be furnished, but in spite of this the book contains much valuable information and is a very readable and interesting production.

Diseases of the Heart and Aorta. By GEORGE ALEXANDER GIBSON, M.D., D.Sc., F.R.C.P., F.R.S. Edin., &c. Edinburgh and London: Young J. Pentland. 1898. Pp. 932. Price 24*s.*

IN the handsome volume before us the author has set himself the threefold task of presenting a faithful reflection of the science and art of medicine as bearing upon diseases of the heart and aorta at the close of the present century; while doing so, of making practical utility his chief aim; and, finally, of doing justice to authors whose name is Legion and a consultation of whose works has been necessary to the fulfilment of his purpose. It will be admitted that for the satisfactory accomplishment of so much special qualifications, qualities, and opportunities are necessary. The qualifications needed are a wide knowledge of the scientific principles underlying the physiology and pathology of disease and a practical instinct for applying these in diagnosis and treatment; the qualities required are inexhaustible patience, steadiness of purpose, and power of work; and the opportunities comprise direct access to extensive material, living, dead, and reported. Those who know the author's work and his position as a teacher in the Edinburgh School of Medicine can have little doubt of his fitness in these respects and we may at once state that

Dr. Gibson has in this volume shown himself to be possessed in an eminent degree of all the essentials for his task which we have indicated and that his work is, in our opinion, at once one of the most comprehensive, readable, and useful text-books with which we are acquainted. We shall now endeavour to justify the opinion which we have expressed.

The book consists of sixteen chapters, of which the first five deal chiefly with the scientific principles involved in the study and treatment of heart disease. In these morphology, physiology, pathology, semeiology, and therapeutic principles are lucidly discussed, and to the knowledge of some important points in these fields Dr. Gibson has contributed valuable material from personal observation and work. His interesting remarks upon the cardiac movements in a case of deficient sternum, upon rigidity of the arteries, upon venous pulsation, and upon Cheyne-Stokes respiration are well worthy of perusal. His exhaustive monograph on the last of these subjects is well known. In treating this theme he does full justice to the observations and opinions of others and thus renders his work, as was his intention, a concise and reliable reflex of current expert opinion.

The remaining eleven chapters deal in detail with the nature and treatment of diseases of the pericardium, the heart, and the aorta. Coupled with the indication of the conditions dealt with there is usually an interesting explanatory commentary when this is possible, and the chapters close with fully detailed clinical histories of illustrative cases which ought to prove very helpful to the student. It would be impossible within the space at our disposal in reviewing so encyclopædic a work to refer at length to many points of great interest, but in all sections of the book Dr. Gibson appears not only as the scholar but also as the personal observer, and he states his conclusions and the reasons upon which they are based in a clear and interesting manner. The normal and important physiological leakage in the right heart and the physical signs in so-called "weak heart" are fully considered. On the latter point the author agrees in the main with Russell in regarding the pulsation in the second left intercostal space as due to the movements of the conus arteriosus, and he has the frankness to disavow his previous adhesion to the view of Balfour that that sign is due to the pulsation of a distended left auricle. He regards the associated bruit to be indicative of tricuspid incompetency. This may be so, but the explanation of the bruit in the pulmonary area by propagation from the tricuspid orifice does not appear to us altogether satisfactory. We rather incline to the view expressed by several, that some cause of increased vibration in the blood-stream exists nearer the manifest seat of the sound. We agree, however, with the author that there are important objections to be urged against the specific explanations hitherto given. Again, in the matter of the serum-therapy of acute endocarditis, and without losing our confidence in the future results likely to accrue to science in this as in other departments from the preparation and use of these remedies, we feel disposed to remark that the author's satisfaction with the attained results in the cases indicated may not be shared by many others. With another recent or resuscitated development of cardiac therapeutics which is somewhat fully treated—namely, the gymnastic and balneological—Dr. Gibson deals in a very judicious manner and with an entire freedom from that unregulated enthusiasm which has done so much to discredit measures useful enough in their own place. It is of interest to learn that he has found the physical effects of the natural and artificial baths to be identical. The chapter on Complex Sensory and Motor Affections of the Heart, including angina pectoris, is an able and succinct account of a difficult subject. His pages on angina pectoris, indeed, contain within a comparatively short space a very complete account historically and clinically of an affection which for various reasons has had a fascination for medical writers and remind us in some respects of that classic, the memorable essay by Sir William Gairdner on the same subject in Reynolds's System of Medicine.

The last chapter deals with Diseases of the Aorta and includes an instructive account of the causes and nature of aortic aneurysm together with a well-weighed judgment upon the various methods of treatment which have from time to time been employed with an encouraging measure of success in some cases.

In a short Appendix on Roentgen Radiography the author notes the value of this method in determining change of position in the heart and the presence or absence of obscure aneurysmal and other intra-thoracic tumours, giving at the same time a good radiograph of displaced viscera. Of the illustrations throughout the volume it may be said that they are excellent and numerous and from the printer's and publisher's point of view the work leaves little to be desired. A copious and accurate bibliography which will be of great service to original workers and a good index terminate what may be looked on as one of the most complete of recent textbooks on diseases of the heart and aorta.

Mastoid Abscesses and their Treatment. By A. BROCA, M.D., Chirurgien des Hôpitaux de Paris, Professeur Agrégé à la Faculté de Médecine; and F. LUBET-BARBON, M.D., Ancien Interne des Hôpitaux de Paris. Translated and edited from the French by HENRY J. CURTIS, M.D., B.S.Lond., F.R.C.S.Eng., Assistant to the Professor of Pathology, University College; Assistant to the Ear and Throat Department, University College Hospital, London. With 11 Coloured Illustrations. London: H. K. Lewis. 1897. Crown 8vo. Pp. x. and 268. Price 6s.

MR. CURTIS has done well in introducing to English surgeons the valuable memoir by Broca and Lubet-Barbon, a work too little known in this country. It is difficult to over-estimate the importance of disease of the middle-ear. Its complications are so far-reaching and so dangerous to life that it is well worthy of more attentive study than is even now bestowed on it. Operations on the mastoid were performed long ago by Petit but they soon fell into disrepute, and it is only in recent years that the operation of opening the mastoid process has again become fairly frequent.

The dangers of the disease are great, but so also are the dangers of the operation which is intended to relieve it, and only a good knowledge of the anatomy of the parts concerned will enable the surgeon to escape the many pitfalls in his path. A brief but useful account is given of the anatomy of the mastoid process and its relations to the lateral sinus, the facial nerve and the brain, and the translator has very wisely inserted in the volume eleven coloured plates illustrating the anatomy of this region which have been taken from a paper by Mr. Rickman Godlee. These portray the relative positions of the structures as seen in sections made in various directions through the temporal bone, and a much clearer idea is gained by the examination of these diagrams than would be possible in any other way.

The work is divided into four chapters, the first of which is devoted to Mastoid Abscesses, the second to Mastoid Fistulæ, the third to Chronic Suppurative Inflammation of the Middle-ear in which the inflammation of the mastoid is latent, and the fourth chapter is concerned with the results which have been obtained.

The authors do not consider that as yet any classification of cases of mastoid abscess can be founded on bacteriological data, although many different micro-organisms are met with. Mixed infection is the rule but in one case they obtained a pure culture of bacillus coli. For opening the mastoid process a narrow chisel 5 millimetres (⅕th in.) wide at the most is recommended. The skin incision commences at the

apex of the mastoid, runs upwards to the level of the temporal line, and then turns backwards at a right angle and continues for about ¾ in. Thus is marked out a triangular flap which is raised from above downwards and backwards. The antrum is then opened by a square aperture corresponding fairly closely to the upper half of the mastoid process.

The statistics relating to the results after operations on the mastoid cannot fail to be of interest. 143 operations were performed on 128 patients for 133 diseased mastoid processes; 21 patients died, but in only 3 cases could the death reasonably be attributed to the operation; in 8 cases the fatal result was brought about by intercurrent maladies such as broncho-pneumonia and tuberculosis; 5 patients succumbed to intracranial complications which preceded the operation and 5 to sepsis which had manifested itself before any operative procedure was undertaken.

For the manner in which the translation has been performed we have nothing but praise; it is in clear, readable English and exhibits but slight traces of its French origin.

House Drainage Manual: a Guide to the Design and Construction of Systems of Drainage and Sewage Disposal from Houses. By W. M. SPINKS, C.E., President of the Institute of Sanitary Engineers, &c., Author of "Village Drainage," &c. London: Biggs and Co. 1898. Price 5*s*.

AMONG many good books written upon this important subject this book is one of the best. The author has succeeded in condensing with simplicity and clearness all the essential points to be observed in relation to the efficient drainage of a house, working upon the broad lines prescribed by the model by-laws issued by the Local Government Board. In only one or two places does he touch upon debatable ground—viz., where he advocates the entire disconnexion of the soil-pipes at their junction with the drain by means of a gully, the ends of the branch drains receiving these gullies having separate ventilating pipes. Whatever may be urged against this system it most certainly effectually cuts off all chance of sewer air entering the house through the soil-pipes and the pipes themselves have a better chance of being ventilated. On page 195, when dealing with country property he temporises with the cesspool, but inasmuch as he limits its capacity to the reception of one week's supply of sewage and provides that it is kept so far from the house as not to constitute a nuisance perhaps not much harm can accrue. Most of the well known defects common to badly constructed and badly planned systems of drainage are pointed out. Illustrations showing drain plans as suggested for various classes of property follow. In one or two instances we think a little additional ventilation should have been given to the branch drains to ensure the traps against syphonage. There is an excellent chapter upon Subsoil Drainage, a subject too much neglected. Then follows the consideration of the practical details, such as laying, inclination of, jointing, flushing, ventilating, and trapping drains, and a very detailed consideration of the many engines and appliances with which, unfortunately, our houses have to be surrounded. Their merits and defects are pointed out. Consideration is given to many of the methods in use for the ultimate disposal of sewage and a copy of the modern by-laws is added together with various Acts relating to public health. We can strongly recommend this manual to all who are interested in, or engaged upon, sanitary work.

CHRISTMAS BOOKS.

MESSRS. BLACKIE AND SON send us the following:—*Chips and Chops and Other Stories.* By R. Neish. Price 2*s*. This is a collection of pleasant little stories, the one giving its title to the book being about two dogs—a terrier and a bulldog. Some of the tales resemble those of Hans Andersen and are none the worse for that. The book will be an admirable present for children.—*A Mystery of the Pacific.* By Oliphant Smeaton. Price 5*s*. A story told by a Government inspector in the Polynesian labour trade. A "message from the sea" was picked up giving details of some castaways. When the Government schooner picked up this she started to find out the whereabouts of the castaways and finally discovered a mysterious island where dwelt the descendants of a colony of ancient Rome who had preserved all their forefathers' manners and customs. How the castaways were discovered and what adventures the rescuers met with must be sought in the pages of the book itself. A word of praise must be given to Mr. Wal Paget for his admirable illustrations.—*The Reign of the Princess Naska.* By Amelia Hutchinson Stirling. Price 2*s*. 6*d*. This is a very prettily written and pathetic little story about a child autocrat who ruled over a principality of apparently Russian nationality. The story is so well told and thought out that it was quite a shock to us to come to the following sentence uttered by the Princess's whipping boy, "Shucks! it would be as easy as—as crackers!" What the Tsarkovian vernacular for this would be we cannot say, but surely the author might have put the sentence in some other way. There is an error on page 114, where the Archbishop is spoken of as wearing a large "golden crucifix." This is something which no Oriental prelate ever does—i.e., if by crucifix is meant a sculptured figure. This error is reproduced in the illustration on page 131, but with this exception we have nothing but praise for Mr. Paul Hardy's drawings.—*At Aboukir and Acre: a Story of Napoleon's Invasion of Egypt.* By G. A. Henty. Price 5*s*. *Under Wellington's Command: a Tale of the Peninsular War.* By G. A. Henty. Price 6*s*. *Courage, True Hearts: the Story of Three Boys who sailed in search of Fortune.* By Gordon Stables, M.D., C.M. Edin., Surgeon R.N. Price 3*s*. 6*d*. Here are three Christmas volumes by two well-known authors which merit the attention of those who at the present season are pondering over the choice of a book or books for the amusement and edification of boys. The test which we apply to books of this kind is, we think, a practical and sound one—namely, to give them to some intelligent schoolboy for perusal and opinion. Judging from the avidity with which these volumes have been read they have certainly fulfilled their main purpose—that of interest and amusement. Self-respecting boys with wholesome instincts always have, and always will have, a keen appetite for deeds of daring and for stories of adventure and striking examples of prompt and decided action in safely getting out of "tight" places. These things set their imaginations aflame and later in life make them into soldiers, sailors, explorers, and colonists—not always to the entire satisfaction of their apprehensive mothers and staid fathers, but to the good of the nation notwithstanding. Two of the three volumes are from the prolific pen of Mr. G. A. Henty, who seems to possess an inexhaustible vein of good Christmas stories for boys. They deal with naval and military subjects. The first, "At Aboukir and Acre," is an opportune production at the present time when people's interest in Egypt has been keenly awakened by the exploits of Lord Kitchener of Khartoum and his expeditionary force in the Soudan and up the Nile. Napoleon's invasion of Egypt, the action in the Bay of Aboukir, and the defence of Acre by Sir Sidney Smith, make up a good and well-told narrative. "Under Wellington's Command," by the same author, is a tale of the Peninsular War, continued from Moore in Corunna up to the battle of Salamanca, and there is, as might be anticipated, no lack of incident. It is a sequel to one of Mr. Henty's books of last year and continues the adventures of a dashing Irishman, one Terence

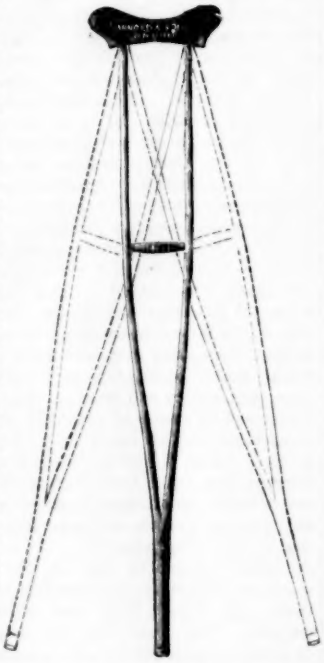
O'Connor, during the Peninsular war. Both books, it should be added, are capitally illustrated with plates and plans. Dr. Gordon Stables's volume, telling the story of three boys who sailed in search of fortune, is full of exciting situations and adventures and is likewise well illustrated. It is excellent reading for boys.

Messrs. C. ARTHUR PEARSON, Limited, have sent us the following:—*Strange Stories of the Hospitals.* By Frank Aubrey. Price 2*s.* 6*d.* This little book is published to be sold in aid of the metropolitan hospitals and medical charities. The author has presented it as a free gift to the Council of the Hospital Saturday Fund, who will receive all profits arising from the sale of the book and will apply them to the objects of the fund. This being so we will not attempt to criticise the stories further than to say that they are quite readable and will serve to enliven a spare half-hour. The expenses of publication have been borne by Lady Meux and Mr. Frank Isitt to whom as well as the author we offer our thanks for the assistance thus given to that form of charity in which we ourselves take a special interest.

New Inventions.

IMPROVEMENTS IN CRUTCHES.

WE have received from Messrs. Arnold and Sons, of West Smithfield, a pair of crutches of a new design, their distinguishing feature being that the padded leather-covered heads are not fixed immoveably to the uprights, but are capable of a limited rocking motion, so that as the person using them walks along the unavoidable to-and-fro movement of the crutch does not cause the head to shift its position in the armpits. A uniform pressure under the arm is thereby given and friction against the armpit is reduced to a very small amount, adding to the comfort of the user and diminishing the tendency to wear out the sleeve of the coat or dress. The crutches are strong and quite rigid in respect of affording support to the body, and at the same time the heads possess a certain amount of elasticity and "give" which will be appreciated by users. They have a well-finished appearance,



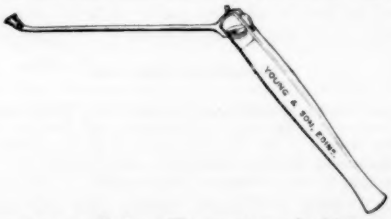
are light in weight, and are extremely simple in construction, having no springs or mechanism liable to become disordered. Messrs. Arnold and Sons state that a pair of these crutches have been recently tested by a cripple who walked 100 miles with them in one week without suffering from soreness or strain or otherwise distressing himself.

MILNE'S RIBBON GAUZE.

EVERY surgeon must have experienced great difficulty in using strips of gauze for plugging wounds; the gauze cannot be torn and must be cut to form a strip and then the edges are very prone to fray, so that particles of cotton can very easily be left in the wound. Mr. Charles Stonham has suggested the use of specially woven ribbon gauze with an edge which cannot fray, and the Galen Manufacturing Company, of Ladywell, London, S.E., have manufactured gauze of a uniform width of 2 in.; this is supplied either plain or medicated with the antiseptics in ordinary use, such as sal alembroth, carbolic acid, and iodoform. From a sample with which we have been supplied we are able to say that this ribbon gauze will prove useful for the purpose for which it is intended; it cannot fray as the threads of the woof do not terminate at the edge of the material. It is packed in bottles in convenient lengths of about 12 in.

NASAL CURETTES.

THESE instruments, of which an illustration is given, have been designed for the purpose of performing curettement of the nasal mucous membrane. Each curette consists of a handle and a blade jointed together in such a way as to permit of its being flexed to, and fixed at, any angle that

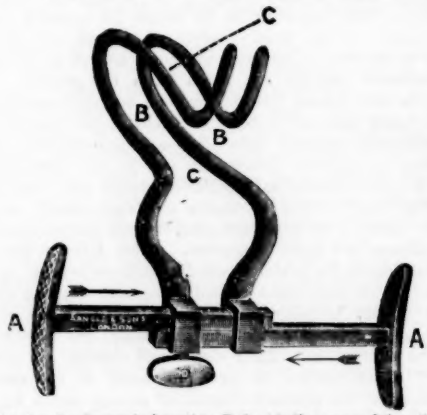


the operator may desire. The curettes, of which there are five in a set, vary according to the size, shape, and angle of their scraping points. They have been made for me by Messrs. Young and Son, Forrest-road, Edinburgh.

Edinburgh. G. HUNTER MACKENZIE, M.D. Edin.

A NEW PARALLEL EXPANDING RECTAL SPECULUM.

IT is said that the multiplicity of instruments for one use indicates that not one is perfect. If this be so no excuse is needed for invention or improvement. After a fair trial of the instrument represented below—which has been skilfully made by Messrs. Arnold and Sons at my suggestion—I can confidently recommend it. It is simple, effective, and self-retaining. Its open construction affords an extensive field, allowing



A A handles for use in insertion, D the binding screw fixing the slide marked by the arrows.

of many manipulations. Thus C C and B B are open spaces. To open the instrument the hand grasps and approximates A and A, or with obdurate sphincters the thumb may be placed in C, and C and A approximated. Thus the resistance of the sphincter is met by the intelligent hand and not by a lever or screw. The instrument is shown partly open. To withdraw see that D is not in action and press the blades together.

Finsbury-pavement, E.C. JAMES MACMUNN

THE LANCET.

LONDON: SATURDAY, DECEMBER 10, 1898.

WE are disposed, upon consideration of the various penal cases decided upon by the General Medical Council at their recent sitting, to be very proud of our profession. A great deal is heard about any irregularity of conduct in a medical man when it occurs, but that is because the general standard of behaviour is so high that all departures from it excite comment and surprise. *Noblesse oblige:* the obligations of our high functions are recognised and they are fulfilled. Upon what other view can we explain the fact of the small list even of charges which are brought against members of the profession for professional misconduct and the comparatively light nature of the charges themselves? The public despite the strenuous attempts of a section of the lay press trust their medical men, and they may well be confirmed in their high estimate when they see that of 34,000 men only 5 have been brought under the disciplinary notice of the General Medical Council and that but 2 of these were found to have been unworthy to remain on the Medical Register. We are no apologists for any laxness of professional behaviour, for any falling away from the high standard of service which the best practitioners have set up for their own guidance and which the man whose work lies among the poorest of our inhabitants or in the remotest village of our land often best exemplifies. But the tribunal of the General Medical Council is not a lax one, and when we look at the penal cases recently heard before it we feel almost inclined boastfully to aver that the natural liability of human nature to error is in the medical profession reduced to a minimum. We recommend our readers occasionally to devote a few moments to the consideration of cases which come before the Council and which, of course, represent a larger number of similar cases which evade such publicity. The study of them will help practitioners to avoid those technical offences which are apt to involve a summons to appear before the General Medical Council.

In 2 only of the 5 cases brought under the judicial notice of the Council did the Council proceed to the use of its great and only weapon of punishment—the removal of the offending practitioner from the Medical Register. One of these was the case of JOHN LLOYD WHITMARSH. The Council in his case was spared the trouble and the pain of an investigation of the facts which do not need any repetition here. His conviction at the Central Criminal Court for the murder of ALICE BAYLY being duly reported to the Council its duty, under the 29th clause, was obvious. His removal from the Register purges the profession of one who had brought disgrace on it. The use of medical knowledge to commit illegal and immoral acts is the greatest prostitution of knowledge. The public has great reason to be pleased when this crime is brought to light and when condign punishment falls on the offender, but it cannot be more gratified by such exposure than are the members of the medical profession who feel that the preservation of human life in all its stages is their supreme function. The second and only other case of erasure was that of the name of Mr. FREDERICK ALFRED FISHER, M.R.C.S. Eng., L.S.A. This practitioner was charged with seeking to attract practice by public advertisements in newspapers of his dispensary for "nervous debility" in all the forms which that term suggests. We deeply regret that any registered practitioner should resort to such methods of attracting attention to himself and his remedies. The lesson to be drawn from Mr. FISHER'S fate is to avoid tampering with the weaknesses and ignorance of human nature and with all forms of practice which involve doing so. We desire to offer to Dr. HUGH WOODS our congratulations upon the effective way in which he conducted this very proper prosecution on behalf of the Incorporated Practitioners' Society.

The remaining cases which occupied much of the time of the Council are such as almost necessarily arise out of the system so lately prevalent of employing unqualified assistants and the resolutions of the Council restraining that practice. Three registered medical men found themselves on their defence before the Council for the alleged wrongful use of assistants in practice. They were all subjected to a long process of inquiry. In the end they were all told that the charge against them was not proved. In one case, that of Mr. CHARLES ALEXANDER DUCKET, the defendant was the qualified assistant of a registered practitioner and had been blamed at two inquests for sending an unqualified practitioner to help him in his principal's practice. In another case, Mr. FREDERIC MERCER was charged with sending an unqualified assistant in an emergency to a midwifery case, he himself having seen the case both before and after confinement. The third case, and in some sense the most interesting of the group, was that of Dr. JAMES HAVARD JONES, who stepped into the vacancy occasioned by the resignation of certain medical appointments at mines by Dr. JOHN JONES of Clydach, Swansea. Dr. JONES resigned after dismissing an unqualified assistant, Mr. GEORGE JENKINS, who had been for almost a generation a continuous element in the medical attendance on the miners of the district. Principals might change, but Mr. GEORGE JENKINS remained till the new rules of the General Medical Council came into force, when Dr. JOHN JONES, out of proper deference to the Council's authority, resolved absolutely to part company with him. But as a consequence he found himself forced to resign his appointments at the mines. Dr. HAVARD JONES, a stranger in the district of Clydach, found means at once of conciliating the miners and discontinuing the services of Mr. GEORGE JENKINS. He became Mr. JENKINS'S tenant, lived in his house, drove his trap, and paid his daughter for board. The evidence of "covering" was certainly weak, for there was no proof that Mr. JENKINS attended any cases with or for his tenant who was ably defended by Mr. LAWSON WALTON, Q.C.

The least pleasant but by no means the least useful part of the work of the General Medical Council is that which has reference to the penal cases. We are sure

that most of the members would be thankful if the cases which come before them could be dealt with by the individual bodies whence the degrees and diplomas of the accused persons have been obtained. It is certain that many of the offences for which members of the profession are brought before the Council would never become matters for public discussion if the bodies, whether universities or corporations, displayed a little more interest in their past students and gave them now and again a word of remonstrance in regard to behaviour which tends to place the practitioner in a discreditable light before the public.

WE have seen a printed memorandum from the Seamen's Hospital Society purporting to answer "paragraphs and letters" which have appeared "in the newspapers both lay and medical." Certain objections which have been taken to the scheme as at present promulgated are instanced and dealt with. The first objection mentioned is "that the selection of the Branch Seamen's Hospital was not a wise one and that the *Dreadnought* at Greenwich and Netley offered superior advantages." We have argued that neither the parent hospital at Greenwich nor the Branch Hospital is suitable for the proposed school and have stated the reasons on which we base our opinion. One of the main objects of the new school is to afford opportunities for candidates for colonial appointments to study tropical diseases and we believe that Netley, with its staff of teachers who have practical experience of tropical diseases and its admirably equipped bacteriological laboratory, together with the number of patients recently returned from tropical countries, would afford every facility for the purpose. Building, equipping, and maintaining at an enormous cost a new school at the Royal Albert Dock would simply be to duplicate what already exists and if the public were duly informed of these circumstances we very much doubt if the necessary funds would be forthcoming. The memorandum goes on to say, "There is no reason to suppose that the War Office would allow medical men of every class [i.e., civilians, medical missionaries, &c.] to study at Netley." We may reply that "civilians, medical missionaries, &c.," can, if they so desire, obtain ample instruction at the various medical schools and laboratories already in existence, whilst we believe that an arrangement might well be made between the Colonial Office and the War Office whereby the colonial medical officers might undergo a course of instruction at Netley.

The policy of the committee of the London School of Tropical Medicine is certainly curious, for in reply to the objection "that the concentration of tropical cases at the Branch Hospital will operate to the detriment of the parent hospital—the *Dreadnought*," they simply remark, "Concentration of cases of tropical disease at the Branch Hospital is certainly desirable, but patients suffering from tropical diseases and applying for admission to the *Dreadnought* Hospital would still be admitted and treated there." This practically admits the intention to deplete the *Dreadnought* Hospital of cases of tropical disease. The third objection selected for answer is the all-important one—namely, "that the clinical material offered at the Branch Hospital is insufficient and that the hospital is difficult of access." We have already given statistics, derived from the printed report of the Seamen's Hospital Society, which conclusively prove that the material of both the parent and the branch hospitals is not sufficient to justify the proposal to expend large sums on new buildings for the purpose of establishing a school. The total number of beds is to be only 45, whilst at Netley there are 1000. The memorandum states that the number of cases of tropical diseases under treatment at the Branch Hospital during the year ended Nov. 30th last was 81 (our figures were taken from the report 1895–96), and that of this total 31 were suffering from malaria; and then come the words, "These cases alone are sufficient to justify the establishment of a school there." Are they? All connected with general hospitals know that numerous cases of malaria, amply sufficient for instruction and investigation, are treated every year in the wards of such hospitals without the incurring of any special public expenditure.

The fourth objection attacked by the memorandum is "that it is unnecessary to build laboratories as it is proposed, seeing that at many places in London there are now fully-equipped establishments." The only answer offered is, "Every teacher of clinical medicine must be fully aware that to separate the laboratory from the ward is highly prejudicial to successful work." We very much doubt whether "every teacher of clinical medicine" would agree with this. A microscope with a few simple reagents might be kept in a room near the ward, but the laboratory, every clinical teacher would think, is better some distance away. The most complete reply on this point, however, is contained in a letter which we publish from Professor CROOKSHANK whose prolonged experience in bacteriological research gives to his opinion an authority which it would be difficult to dispute. We would especially draw attention to the last three paragraphs of his letter where a scheme is formulated which well deserves the attention of the Home Office. Professor CROOKSHANK'S communication strongly supports our view that new bacteriological laboratories are unnecessary. Finally in the memorandum the personal element is introduced. For this portion of the controversy there can be no doubt that the committee of the Seamen's Hospital Society is to blame. The letters published last week as well as those in our present issue show that an apology from the committee to the honorary staff of the *Dreadnought* Hospital is the least amend which can be made.

It is much to be regretted that the Royal College of Physicians of London was not approached in the first instance and asked to advise as to the foundation of the school. Looking to the manner in which the scheme has been introduced we cannot but feel that if every portion of it is managed in the same way as the attempted formation of the teaching staff has been, the Managing Committee will at once lose the confidence of both the medical profession and the public.

THE report of the Pharmacopœia Committee to the General Medical Council is well worth the serious consideration of the medical profession, since it foreshadows very clearly some of the steps which are to be adopted in preparing for the next issue of the British Pharmacopœia. It used to be

currently believed that in the intervals between the publication of the different issues the Pharmacopœia Committee sat with folded hands, placidly watching the sales of the volume, ordering new copies to be struck off as the supply showed signs of exhaustion, and waiting patiently until pressure of public opinion forced forward the preparations for a new Pharmacopœia. Whether this belief had any foundation in the past it is not our present purpose to inquire. The volume certainly occasionally became antiquated and its vitality was not completely restored even by the publication of an Addendum. This expedient could not be trusted to keep it abreast of the times, since though it was possible to give official recognition to new drugs and to give formulæ for new official preparations it was not possible to alter the existing Pharmacopœia without creating confusion and the only way to satisfactorily make any material change in the volume consisted in the publication of slips of corrigenda.

With the progress of knowledge, however, changes in the official standard are frequently necessitated and in the past the need of revision has found expression both from medical men and from pharmacists. The former have desired the recognition of newer remedies which, being found to be serviceable, should have their properties clearly defined so that the profession could rely upon obtaining a supply of definite composition and constant strength. Pharmacists, on the other hand, have been no less persistent in pointing out possible improvements in the modes of compounding the official preparations. It is obviously useless for any Pharmacopœia to retain instructions which have become obsolete, while it is equally futile for the volume to be overburdened with drugs which have fallen into disuse. Alterations, therefore, in any Pharmacopœia concern both pharmacists and members of the medical profession, and there has been a time-honoured dispute with regard to the legalised production of the Pharmacopœia under the auspices of the General Medical Council alone.

It is well known that in the preparation of the Pharmacopœia of 1898 very material assistance was afforded by the Committee of the Pharmaceutical Society of Great Britain, but, notwithstanding the value of the help which they afforded, the pharmacists of Ireland seem to have taken exception to their exclusion which was doubtless unintentional. It is interesting, therefore, to note the suggestion in the report of the Pharmacopœia Committee that the "Pharmaceutical Societies," a term which includes the Society of Great Britain and that of Ireland, should be invited by the Council to coöperate in the work connected with the publication of the next Pharmacopœia, and it will further perhaps tend to greater cordiality of work when it is realised that these societies may be invited to appoint representatives to confer with members of the Pharmacopœia Committee. In presenting the report Dr. LEECH said that instead of the Pharmacopœia Committee of the General Medical Council and the representatives appointed by the Pharmaceutical Societies working on independent lines, with Dr. ATTFIELD reporting from the one to the other, they would have in future a joint conference.

Another indication of the desire to improve the Pharmacopœia lies in the suggestion that, apart from the report on the criticisms passed on the Pharmacopœia to be prepared by Dr. ATTFIELD, some of these criticisms are in all probability to be investigated and reported on by experts in pharmacy and pharmaceutical chemistry. It will be remembered that the General Medical Council appointed referees who assisted in producing the Pharmacopœia of 1898, but it is now apparently the intention of the committee to be at work continuously accumulating information for the next publication of the Pharmacopœia. That the requirements of the medical profession are to be kept well in view is shown by the fact that Dr. TIRARD, who rendered such efficient service in connexion with the present Pharmacopœia, has been requested to act as reporter to the Pharmacopœia Committee on advances in pharmacology and therapeutics bearing on the Pharmacopœia. It is further to be noted that this committee has now been entrusted with the power to appoint experts in Pharmacy and Pharmaceutical Chemistry to report upon any matters which in the future may be deemed worthy of investigation.

Evidently, notwithstanding the amount of care which was expended in the production of the present Pharmacopœia, and notwithstanding its favourable reception and the notable absence of gross errors, the committee are clearly of opinion that some of the criticisms deserve notice which will involve further research before determining whether the criticisms are well founded. It is obviously the intention to proceed immediately with the accumulation of information and to leave no stone unturned that will enable those responsible for the next issue to produce an even more satisfactory result. As the law stands at present the Pharmacopœia must be issued under the authority of the General Medical Council, but this does not preclude a *rapprochement* which will permit the interchange of views between the pharmacists and the Pharmacopœia Committee.

THE question of the fees to be paid to public vaccinators for their work under the new Act naturally continues to be debated with interest by those who are primarily concerned. In particular, proposals as to fees for mileage have been largely discussed, as, for example, at the meeting of public vaccinators at Malton, of which a report appeared in THE LANCET of Dec. 3rd, and by the board of guardians of the Bootle Union, Cumberland, whose decisions were reported in a letter[1] by Mr. P. BUTLER STONEY, the public vaccinator of one of the districts of the union, while a short account of the meeting will be found at page 1574. At the Malton meeting, as reported, it was freely stated that some system of payment by mileage was the only fair one. In the end this opinion seems to have been to some extent departed from, as the unanimous resolution was "that the fees of public vaccinators should be 2*s*. 6*d*. and 5*s*. in urban districts and 2*s*. 6*d*. and 10*s*. 6*d*. in the rural districts, these fees to cover all duties." This would not be a system of mileage, though the terms of the resolution take general cognisance of distance. Mr. STONEY in his letter states that the public vaccinators of his union had, previously to their meeting with the guardians, determined to ask a travelling allowance of 1*s*. per mile for distances

[1] THE LANCET, Dec. 3rd, 1898, p. 1505.

over one mile whether the child visited were vaccinated or not at the visit. The result, however, was an arrangement which in principle follows the lines ultimately approved of by the meeting of public vaccinators at Malton. The guardians concluded that they would not pay for mileage, but that in the urban part of the district (an area of 1311 acres) the minimum fees would be given, while in the rural part (extending about five miles in one direction and eight miles in another) the payment for successful vaccinations would be 11*s.*, and for a small outlying portion about from twelve to twenty miles from the vaccinator's house 25*s.* Another of the public vaccinators of this union, with a district of about twelve miles, has had his fees fixed at 12*s.* 6*d.* per successful case, and still another, with an eight mile district, is to receive 9*s.* 6*d.* per case, the initial fee of 1*s.* being extra in all cases.

The reasons given by the Bootle guardians for refusing a mileage rate were that the Local Government Board would not allow such an arrangement and that there would be much difficulty in checking mileages and that this difficulty would give rise to disputes. It does not appear from Mr. STONEY'S letter whether the guardians had actually ascertained from the Local Government Board that they would not sanction a mileage rate (and that is a point to which we have referred in previous articles), but we do think some weight attaches to the other objection raised by the clerk—namely, the difficulty in checking mileage and the possibility of disputes. Perhaps since the discussion began too much has been made of this particular method of regulating fees by mileage and the Malton meeting may have been well advised in arriving at a resolution in the more general terms above quoted. Medical men hold many offices where distance is a factor bound to be considered as regards remuneration, yet they do not always or often have an exact scale of payment per mile. In club practice, for example, a common rule is that the medical officer's work shall be limited to a three-mile radius and that within that area there shall be no variation in the payment per member. In mining districts similarly many appointments take no note of distance as between one contributor and another, all the employés paying the same fee. Of course, in some places, especially in the case of clubs, the fee may be too low, but the remedy is not usually found in distinguishing between one distance and another but rather in having the fee increased for all members independently of distance. There seems no good reason why, within proper limits, a similar system should not prevail for public vaccinatorships—such a system, for example, as Mr. STONEY describes, in which, within the bounds of specified areas, the fees are alike, though they vary as between one area and another. Mr. STONEY asks our opinion of the terms obtained in his union and the only criticism we would make is with regard not to the payment for successful vaccinations but to the initial payment, or, as he calls it, the registration fee. This fee his guardians seem to have refused to raise above the minimum of 1*s.*, no matter what the distance may be. Whether or not this will result in much hardship must depend to a great extent on local circumstances. Assuming that anti-vaccination has little sway in his neighbourhood the cases in which a visit will not result in a vaccination should be comparatively few, especially in the more sparsely populated areas where infectious disease is less likely to prevail or to be a reasonable cause of postponement of vaccination. Yet the Bootle guardians seem to have been hardly logical. For if in one part of their district it is reasonable to increase the fee for successful vaccinations from 5*s.* to 25*s.*, it is difficult to see why some addition ought not also to have been made to the minimum fee for statutory visits. It is no doubt possible, however, that in fixing the payments for successful vaccination consideration may have been given to the fact that only the minimum payment was to be made for the initial visit even though it should not result in a vaccination. The opinion of the public vaccinators at the Malton meeting appears to have been that under no circumstances should the initial fee be less than 2*s.* 6*d.*, though they do not object to the minimum of 5*s.* for successful vaccination in urban districts. At the same time they resolved that in rural districts the fee for successful vaccination should be 10*s.* 6*d.*, but they did not propose any addition to the 2*s.* 6*d.* fee as suggested by them for the statutory visits in urban districts. It is not quite clear why in this respect they make no difference between urban and rural districts.

The Local Government Board in fixing the minimum fees at 1*s.* and 5*s.* had probably in view the case of a thickly populated district of small area with the vaccinator living and practising in the midst of it and with anti-vaccination at a low ebb or with the conscience clause so used as to exclude practically all objectors from the lists submitted by the vaccination officer. Looking to the considerable increase in expenditure which will be involved even in the minimum fees and to the noisy opposition to vaccination which exists in so many parts of the country the central authority seem to us to deserve the thanks of the vaccination service for supplying its members with so good a foundation on which to base their negotiations with their local boards. The Birmingham guardians, it may be noted, think the minimum scale too high. To demand a silk gown in the hope of getting a sleeve is a good working principle in many mundane affairs, and the resolutions arrived at by meetings of public vaccinators do not necessarily mean any want of appreciation of the action of the Whitehall Board. The result of the Nantwich appeal to the Board[2] will be awaited with interest. Mr. THOMSON, one of the public vaccinators there, pointed out to the guardians that the distance of the districts from the residence of the vaccinators in the union averaged from four to six miles. This is surely a case in which the minimum payments are insufficient and yet by a majority of 15 to 10 it was determined to pay no more, the consequence being that the matter will now be brought before the Local Government Board; and the case will be of much importance as indicating the views of the Board with regard to the operation of their minimum scale. It is satisfactory that boards of guardians are in many places taking up a more reasonable attitude than at Nantwich. At Malton and Norton (Yorkshire), for example, the fees, inclusive of all claims, are likely to be not less than

[2] THE LANCET, Dec. 3rd, 1898, p. 1501.

2*s.* and 10*s.* instead of 1*s.* and 5*s.*, and they are fixed at 2*s.* 6*d.* and 7*s.* 6*d.* in several metropolitan unions.

We learn, on inquiry, that a communication is about to be addressed from Whitehall to the boards of guardians in England and Wales on the matter of fees both to public vaccinators and vaccination officers, and that there is a greater inclination to raise the fee for procuring vaccination than for merely formal visits to record the refusal of a parent to have his child vaccinated. There is little disposition, we understand, to such an increase of the fee for the statutory visit as would so far pay an officer as to make him careless about getting the child vaccinated; hence there may be a desire even when mileage is considered not to disturb the ratio laid down between the minimum fees of 1*s.* and 5*s.*

Annotations.

"Ne quid nimis."

BACTERIOLOGICAL DIAGNOSIS.

A CORRESPONDENT draws our attention to the fact that the Camberwell Vestry has been the first vestry in London to appoint a bacteriologist to work at certain of the problems which occupy the attention of the medical officer of health. This is a new and in many ways a good departure and is certainly an experiment which is well worth careful attention, especially if the bacteriologist is to devote his whole time to the work of the vestry and to be correspondingly well paid. There can be little doubt that there is more than sufficient work to keep a bacteriologist fully employed, even though he should devote the whole of his time and energy to the appointment; whilst if he should give a part only of his time the appointment will be of value to the community. At the same time it must be evident that there may be some waste of energy and brain power if a thoroughly competent bacteriologist (however well paid) is to be expected to do a great deal of routine work which might equally well be done by skilled and unskilled assistants, and it certainly comes to be a question whether in the present state of affairs it might not be better, as we have already pointed out, to utilise to a greater extent existing facilities, and in a large community like that of London to centralise the work at two or three points. There can be little doubt that under different men very different results will be obtained, first as regards the efficiency of the work done and secondly as regards the amount of information which will be collected and made public and the value of the statistics so obtained. It is, however, well that some such experiment as that brought under our notice by our correspondent should be tried, especially as anything which is conducive to accuracy and rapidity of diagnosis will be heartily welcomed by all who are concerned in guarding the public health. It is even possible that it may be found necessary not only to have local laboratories but also to have special and consultation laboratories where work out of the ordinary routine, for which special and expensive apparatus is necessary, may be carried out. The need for bacteriological work is only just coming to be appreciated, but already there is such specialisation that it is difficult to see how any single man will be able to attack unaided (or even with the assistance to be obtained in a small laboratory) the multifarious problems with which the bacteriologist of to-day is faced. The diagnosis of diphtheria, of typhoid fever, of tuberculosis, of pneumonia, of anthrax, of cholera and the like form only a very small proportion of the work to be done. The examination of air, of soil, of water, of condemned food stuffs, and of milk will all have to be undertaken and it is quite within the bounds of possibility that laboratories will have to be founded and appointments made for the carrying on of these individual branches of work. This, however, may fairly be assumed, that whatever may be the initial cost of these laboratories and whatever it may cost to keep them well manned and equipped the direct and indirect saving to the community would be sufficient, first through the direct saving of life brought about by early diagnosis and secondly by the elimination of foci of infection and a consequent circumscription of the areas of infection and disease, during the first two or three years alone to found and endow these laboratories for a couple of score of years to come. We think that our correspondent is perfectly correct when he states that the reduction of the death-rate from diphtheria alone as brought out by the returns of the Metropolitan Asylums Board is ample justification for any vestry making arrangements to have bacteriological investigations carried on for them.

THE QUEEN'S VISIT TO NETLEY.

THE Queen's solicitude as to the condition of her sick and wounded soldiers was again shown on Saturday last, when for the third time this year she paid a visit to the Royal Victoria Hospital. A break in the bad weather lately experienced on the coast occurred, and during a portion of the time Her Majesty spent at Netley the sun shone brightly, the day being a warm one for the time of year. The portico by which the Queen was to enter the building was adorned with trophies of flags and shields and with a mass of palms, flowers, and ferns, while the corridor along which the Queen was to pass was carpeted with red cloth. Travelling from Windsor by way of Byfleet, Cosham, and Fareham, the Queen reached Netley station at 1.30 o'clock. Her Majesty was accompanied by Princess Beatrice and Princess Victoria of Schleswig-Holstein and was received at Netley station by General Sir Baker Russell, commanding the Southern district, and his staff. In attendance were the Countess of Lytton, the Hon. Mrs. Alaric Grant, and Lieutenant-Colonel Sir Arthur Bigge, while the two equerries were Major-General Sir John McNeill, V.C., and Lieutenant-Colonel Davidson. In an open carriage, a few minutes in advance of the Royal party, Lord Kitchener of Khartoum, who had joined the Royal train at Windsor, drove up to the hospital, and with him was Sir Henry Rawlinson, who was on his staff during the Soudan campaign. The Queen reached the hospital just before 2 o'clock, and was received by Surgeon-General Nash, principal medical officer, and the following officers of the Royal Army Medical Corps—Colonel Notter, Colonel MacLeod (of the Indian Medical Service), Colonel Stevenson, Lieutenant-Colonel Blennerhassett, Lieutenant-Colonel Webb, and Major Dick. Here, too, waiting to receive Her Majesty were Miss Norman, Lady Superintendent of the Army Nursing Service, and Colonel Creagh, A.A.G. at Netley. A bouquet was presented to the Queen by Miss Nellie Stevenson, daughter of Colonel W. F. Stevenson, R.A.M.C. Entering a wheeled hand-carriage which was propelled by an Indian servant the Queen passed along the corridor to the lift by which she was conveyed from corridor to corridor, inspecting the different wards both in the medical and surgical divisions of the hospital and speaking words of comfort to the wounded and stricken soldiers. In the corridor of the medical division of the hospital all the convalescent patients entitled to the Atbara and the Omdurman medal were drawn up in order of regiments, the men of the 21st Lancers being formed up on the right of the line, Royal Artillerymen of the 32nd

Field Battery came next, with the Guards on their left, and after them the Seaforths, Camerons, Lincolns, Warwicks, Rifles, Northumberland Fusiliers, and Lancashire Fusiliers. The most interesting feature of the day was the personal presentation by the Queen of the medal "For distinguished conduct in the field" to two gallant men of the Royal Army Medical Corps—viz., to Staff-Sergeant G. A. Benson and to Private A. Davidson, both of whom served in the First Brigade Field Hospital during the late campaign. During the visit the Sirdar who followed in the wake of the Queen through the various corridors and wards decorated 180 men with the medal struck by the Khedive in honour of the campaign. On Saturday last the hospital contained 800 sick and wounded men and of these the Queen saw over 600. Among the patients, apart from the sick and wounded from the Soudan, are men from India, Crete, Mashonaland, and the West Indies. Before leaving Netley Her Majesty was conducted to the operating theatre where the Roentgen rays were demonstrated by Colonel Stevenson, Princess Beatrice having the shadow of the bones of her hand thrown on the fluoroscope. The Royal visit terminated shortly after three o'clock and Her Majesty returned to Windsor by the South-Western route, arriving at the Castle at six o'clock.

THE EXPENDITURE OF THE METROPOLITAN ASYLUMS BOARD.

IN a letter from the Local Government Board referring to the managers' application for an order authorising the borrowing of a further sum of £2413 4*s.* 6*d.* in respect of alterations and additions to the South-Western Hospital the Board state that they find similar irregularities to those which occurred in the erection of the Brook Hospital on the part of the architect, and omit from the order the amount which under ordinary circumstances would be due to him as commission—viz., £62. The architect, in a letter to the managers, has defended his conduct in the case of the Brook Hospital. We do not see much evidence of any motive of personal advantage in the architect's large orders, but such motives get blended dangerously with the love of grand schemes, for which neither the architect nor the managers have the trouble of finding the money. The system is obviously not in the public interest. Let anyone contrast the scale and system of this expenditure with those of voluntary hospitals or of private individuals and they will see to what length this system has been carried. It must be checked or it will demoralise both the public and the managers. Unfortunately, it is not a subject which the party politician cares for. We must look to the Local Government Board to do its duty.

THE LAST OF LUCCHENI.

THE appeal to the Court of Cassation in behalf of Luccheni was withdrawn by his counsel *per mancanza di motivi* (for lack of grounds) and on the night of the same day (Nov. 22nd) he was removed, heavily manacled, to the prison where he is to spend the next six months in solitude. Thereafter he will be "accommodated" in the penal *oubliette* where he will be put to hard labour for the rest of his life. He is, we read in the Italian journals, "completely changed; no more the petulant cynic he was on the day of trial, but wan, dejected, prostrate (*pallido, abbatuto, accasciato*). He deplores his abominable crime," adds the reporter, "the religious sentiment dominates him, and he is haunted by fear of the eternal punishment awaiting him after death." All this was foreseen by his medical examiners who made full allowance for the vanity which was his ruling principle and which sustained him in the arrogant, the revolting self-assertion he assumed in open court. Withdrawn from the public gaze and the gratification he drew from this position he collapses at once into the "hysterico-epileptoid imbecile" of the criminal anthropologist and comports himself accordingly. The fact is not without its significance for the legislator, explaining as it does the wretched creature's disappointment that he was not tried in a canton where capital punishment (as in Lucerne) is still in force. Steeped in the spurious rhetoric of anarchism he had looked forward to the guillotine for which he had qualified—the guillotine and the scaffold, that "tribune of the socialist martyr," as his French prototype Vaillant called it. But that opportunity of ventilating his *amour-propre* is denied him and he has to share the common and ignoble doom of the Italian homicide—a mere unit among many other compatriot malefactors. We hope that the International Congress for the Suppression of Anarchism now sitting in Rome will take practical note of this collapse of Luccheni. Arrested red-handed from their crime, anarchists should not be gratified with the public trial they count upon or even with the theatrical execution they court. Vanity being in most cases their guiding motive they should under every legal safeguard and formality be brought to justice in private and be visited with its severest penalty in private likewise. Legislating on such lines the Powers represented at the Congress will have introduced an effective deterrent for such assassins, and so far the criminal anthropologist will find that he has not preached in vain. Another deterrent not unworthy of consideration is the penalty of flogging in the case of would-be or unsuccessful "Lucchenis." We have already[1] treated of this form of punishment which certainly put down garotting and which by the humiliation it combines with physical suffering would appeal powerfully to the vainglorious as well as effeminate side of such "rhetorical" specimens of the *belva umana* as Vaillant and his latest disciple. But, as we have previously urged, a deeper policy than that of the restrictive or repressive legislator must be adopted in dealing *ab initio* with anarchism and its instruments, and for this we must look to reforms inspired not merely by the forensic but by the medical innovator. The Congress of Criminal Anthropology which by a strangely suggestive coincidence met at the scene of the late anarchist crime just three years previously to its commission was not without its lessons and its admonitions to the Governments of Europe. Had these latter, particularly that of Italy, paid due attention to what was put in evidence on that occasion measures would have been adopted which might have prevented the tragedy of the Quai du Mont Blanc. Let us hope that profiting by that and similar sad experiences European statecraft will take a more intelligent interest in the next Congress of Criminal Anthropology which in the August of 1899 will assemble at the Hague.

TWO MEDICAL HEROES.

THE latest name added to the roll of the Victoria Cross is that of Surgeon William Job Maillard, M.D. Lond., of the Royal Navy, upon whom the decoration has been conferred for conspicuous bravery during the outbreak at Candia on Sept. 6th, 1898. At that date, during the landing of seamen from Her Majesty's ship *Hazard*, Surgeon Maillard, who had disembarked and reached a place of safety, returned through a perfect deluge of bullets to the boat and endeavoured to bring into safety Arthur Stroud, ordinary seamen, who had fallen back wounded into the boat as the other men jumped ashore. Surgeon Maillard failed to bring Stroud in only through the boat being adrift and it being beyond his strength to lift the man (who was almost dead) out of so unstable a platform. Surgeon Maillard returned to his post with his clothes

[1] THE LANCET, Oct. 29th, 1898, p. 1146.

riddled with bullets though he himself was unhurt. Our heartiest congratulations to Surgeon Maillard. By a curious coincidence we have to offer the same sort of congratulations to a French naval surgeon this week. In virtue of a decree dated Oct. 1st, 1898, the Cross of the Legion of Honour has been conferred upon Dr. Bartet, a young naval surgeon employed on active service in Upper Dahomey. The act of gallantry which it is designed to recognise is thus briefly described in the official record: "During the affairs of the 4th and 8th Nov., 1897, while serving with the Borgou column this officer, despising death, completed his difficult duty beside the wounded under a perfect rain of arrows."

GLYCERINATED LYMPH.

THE following minute has been issued by Mr. Henry Chaplin, President of the Local Government Board:—

Local Government Board, Nov. 16th, 1898.

I desire to place on record an expression of the value which I attach to the labours and researches of Dr. Sydney Monckton Copeman in connexion with the preparation, by the aid of an aqueous solution of glycerine, of a vaccine lymph which is free from harmful organisms. An indication of the value which is attached to Dr. Copeman's researches is to be found in the fact that Parliament has decided by Statute that this form of lymph shall for the future be used in this country. HENRY CHAPLIN.

We are glad to be able to offer our congratulations as well to Dr. Copeman with regard to his arduous researches into the question of glycinerated lymph, though of course the idea of using glycerine as a vehicle did not originate with him. But we think it is fair to say that he has raised what was formerly a mere hypothesis in this country into the region of ascertained fact. By the use of properly prepared and standardised glycerinated lymph the last shred of objection which any objector other than a pig-headed fanatic can possibly put forward to vaccination has been done away with, and we can only hope that the "tremendous experiment" upon which the Government has entered may not be attended with disaster. If an epidemic of small-pox should come it will fall hardest upon innocent children who will owe disfigurement and possibly death to the mistaken action of those whose first duty it should have been to guard them against such misfortunes.

MARGATE HOSPITAL.

WE are glad to learn that the Margate Sea-bathing Hospital is again open, having been closed by the remodelled committee of management to allow of a complete reconstruction of the drainage together with some minor but not unimportant building operations, one of the objects of which has been a much-needed improvement in the accommodation for nurses and servants. The opportunity has been taken advantage of to appropriate two small wards to the treatment of diseases not "scrofulous" in character but especially requiring sea air or sea-bathing. For many years the hospital or, as it used to be called, "the infirmary" was restricted to "scrofula," but this limitation was no part of the original design of the founders, who imposed no further limits to their charity than poverty and the probability of the patients deriving benefit from the special influences of the place. The establishment of these wards is therefore a reversion to the original design and will, it is hoped, be the means of relieving cases in more rapid succession than was done when only "scrofula" was received and that often in very chronic forms. Among other recent improvements is a new operating theatre which provides all the refinements of antiseptic surgery. The hospital is now being refilled as fast as arrangements can be made, but scarcely rapidly enough to keep pace with the public demand. The wards are pleasing and sanitary, especially those built by the late Sir Erasmus Wilson, and the chapel is no less attractive, while the situation, as close to the North Sea as it is possible for a building to be placed, ensures that no salubrious influence which sea and shore can supply will be wanting to the subjects of serious disease who go there for the ministry of nature as well as of art. We are informed that a very considerable proportion of the large sum which has been expended as indicated has been given by a member of the court of directors who is by virtue of his position well acquainted both with the necessities of the charity and with its utility.

INVESTIGATIONS AT ROME INTO THE ETIOLOGY OF MALARIA.

THE Italian observers, Grassi, Bastianelli, and Bignami, who are associated in carrying out a series of investigations at the Hospital of Santo Spirito, Rome, with the object of throwing light upon the etiology of malarial fever, have again met with success in their inoculation experiments with mosquitoes. The continuation of Dr. Bignami's original paper dealing with this line of research will be found at p. 1541 of our present issue. On this occasion only one species of these insects was employed in the experiment—namely, Anopheles claviger, captured, as before, in the adult stage in the malarious region about Maccarese. The subject of the experiment was a young man who had never suffered from malarial fever and who was received into the Hospital of Santo Spirito for hysteria about four years ago, during which time he has been constantly under observation and has had no kind of fever whatever. This man for nineteen days slept in a room in which were set at liberty from time to time numerous specimens of Anopheles claviger. On Dec. 2nd (the eighteenth day) he began to feel unwell and on the 3rd the blood on examination was found to contain the parasites of malarial fever exclusively of the common tertian type (the spring tertian of Italian writers). This form of fever is prevalent at Maccarese. Considerable difficulty is experienced in continuing these experiments on account of many of the mosquitoes dying and others refusing to feed. This is probably due to the lateness of the season.

PAUPER ATTENDANTS IN WORKHOUSE INFIRMARIES.

AT an inquest held on Nov. 28th by the coroner for Belfast in the union workhouse the circumstances of the death of Henry Savage, a weaver, aged thirty-six years, were inquired into. The coroner said that he had received information that the death of the deceased had been accelerated by improper treatment while he was in the workhouse. The wife of the deceased said that her husband suffered from paralysis and epileptic fits. Dr. MacFadden said that he had seen the deceased prior to his admission and found that he had several bedsores. He considered that the patient should be in an asylum, but on application being made to the asylum authorities they would not take him in. John Brennan said that he had attended deceased as a pauper attendant. He (witness) had said that he believed Savage was starved but he admitted in evidence that he always found plenty of food to give him. Miss Kate Megahy, a Poor-law guardian, said that she had received a letter of complaint signed "John Brennan" concerning the deceased. She had visited Savage and found his bed clean and dry. Dr. Stewart said that he had medical charge of Savage both by day and night. Savage died from degeneration of the brain and should have been in the asylum. Nurse Wright said that she was in charge of the ward in which the deceased was. There were 105 patients and she had to look after them all with the

assistance of two probationers and some paupers. The sheets about the deceased were changed three or four times a day. The jury found that the cause of death was as Dr. Stewart had stated and that Savage had received due and proper care whilst in the workhouse. They also considered that qualified nurses should take the place of pauper attendants. We are glad to be able to think that this patient did not in any way have his life shortened by want of care, but it is nothing less than a scandal that in any institution for the care of the poor one unfortunate woman should have to look after 105 patients even with the assistance of two probationers and pauper attendants in addition. We have referred to this question again and again and shall continue to do so until the scandal of pauper attendants on the sick poor is done away with. Our English workhouses are not above reproach, nor are those in Scotland; but we cannot call to mind any modern instance of one unfortunate woman being responsible for the care and nursing of 105 patients. The Belfast authorities should see that such an abomination is done away with as soon as possible. While on the subject of Irish workhouses we may mention that at the meeting of the Kilrush Board of Guardians held on Dec. 3rd it was found that the school master, the clerk, the master of the local workhouse, and all the heads of the institution had gone off to Cork Assizes. No responsible person was left in charge of the inmates who roamed about as they pleased and one inmate of weak intellect "ran amuck." Besides this there were other irregularities. The guardians described this state of things as scandalous and directed an official to take charge of the establishment. We may well ask, *quis custodiet custodes?* and should be glad to know what course the guardians will take with their officials. The whole story sounds like a tale by Lever of the days at the beginning of the century.

ROAD-MAKING.

WE have received a letter from a town councillor which shows how the doctrine of contagium vivum is permeating the minds of our local governors. Our correspondent objects to have any of the old material previously scraped off the roads used for "grout" when the road is metalled. His objection is on the ground that this material contains putrescible organic matter and he asks us whether his "theory" is correct. But road-making is a practical matter, and whether or not the material used for making the road is foul and offensive can only be answered by an appeal to facts. A heap of road scrapings very soon sweetens and the organic matter is not long in mineralising. Even if the sweepings when used for road-making should contain a small quantity of humus it would be found that it would dry less quickly than pure mineral matter and would have less tendency to fly about in the form of dust. If our correspondent's council are really going to mend their roads with dung, as he seems to suggest, then they are, of course, wrong. But we hesitate to answer his question categorically because it is of great importance that sanitary authorities should study economy and try as much as possible to utilise the materials which it is their duty to collect. It is unfortunately not common to find thriftiness in our municipal management and we hesitate to check it without hearing both sides of the question. It seems to us that road-making is often carried out in too wholesale a fashion and even country places are not content without a steam-roller. This machine, we must suppose, is capable of making good roads under certain conditions but those conditions appear to be rarely met with near London. The pressure per square inch of a steam-roller is less than the pressure of the wheels of a heavily laden waggon and the result is that the steam-roller-made road is very liable to "pocket." For a few weeks, of course, the road is smooth enough, but very soon it "gives" for the reason stated and then the cyclist who traverses it goes along bumping and grunting and perhaps swearing. We inspected a by-road not long ago which after a neglect of about two years had been made up with a steam-roller. The metal was huge and had been merely "chucked" upon the surface of the road. Then came the steam-roller, jerking and roaring over it, with the result that it broke two gas-pipes and made a huge depression at one end. This was filled up and then came, after a lapse of a day or so, the steam-roller on a second visit. This time it broke two water-pipes and we only wonder whether it broke any drain-pipes. Would it not be better to copy the French and place our by-roads, at least, under the care of individuals who should work perpetually upon them—sweeping, watering, and mending. A "stitch in time" is a good old proverb and it is very doubtful economy to allow a road to get into a maximum state of disrepair. The man who had charge of a mile or two of by-road flanked by villas would, if he did his work well, be sure of a Christmas-box, and the work is of a kind which would keep many an elderly man out of "the house."

DEATH UNDER CHLOROFORM.

A DEATH under chloroform occurred recently in St. Bartholomew's Hospital. The patient, a butcher, aged forty-two years and weighing between 21st. and 22st., was admitted suffering from an old injury to his thigh. There was a large abscess pointing in the upper part of Scarpa's triangle and the thigh was in an erysipelatous condition. The temperature was 101·2° F., the heart-sounds were normal, but the lungs were emphysematous. There was some orthopnœa, partly due to the obesity of the patient and partly no doubt to the emphysema. Four hours after admission the anæsthetic was administered by a house physician. Nitrous oxide gas followed by ether was given in order to stimulate the circulation as fatty change in the myocardium was suspected and the heart's action was weak. The patient, however, breathed badly and became cyanosed. The induction of anæsthesia being complete the anæsthetic was changed for chloroform, which was given from lint. To relieve the diaphragm from the pressure of the abdominal viscera the man was turned upon his side and the head lowered. The breathing became less laboured, being regular and somewhat shallow, but the face remained congested. The patient was kept only lightly under the anæsthetic, slight movements of the arms and legs being made during the semi-anæsthesia. The operation was completed, a shallow inspiration was then taken, and subsequently respiration ceased. The tongue was drawn forwards, a ligature being passed through it, and ether was injected into the tissues of the cardiac area. One feeble inspiration was made, but no more. Artificial respiration was ineffectual in restoring vitality. The pulse stopped and the respiration ceased. The necropsy revealed advanced fatty degeneration of the heart and other organs. Death in this case appears to be due to failure of the diseased heart, possibly owing to shock, as it appears that the patient was but very slightly under the anæsthetic, and no doubt it was accelerated by the diseased condition of the man's lungs, his posture, and the fulness of the venous system as evidenced by the congested face and laboured breathing. The case was clearly one of extreme difficulty and even had the operation been performed under a local anæsthetic it is by no means certain that the mental shock might not have brought about the very result that occurred during the administration of the anæsthetic. The carefully prepared notes (for which we are indebted to Mr. Jameson) do not mention to which side the man was turned. Whether the diaphragm is helped by the lateral decubitus in such cases is, we believe,

open to doubt, and there is always the danger of still further hampering respiration and circulation by compressing one or other lung in that posture when the patient is very heavy, especially when emphysema is present. The initial use of gas and ether in this case may be adversely criticised by some but it certainly possessed the advantage—an important one in the present instance—of avoiding the stage of excitement so common when chloroform is used in the induction of anæsthesia. Probably had the development of cyanosis been foreseen the brief operation would have been conducted under nitrous oxide gas mixed with oxygen, which answers well in short cases, although it must be admitted that it is not an ideal anæsthetic for such persons as the patient is described to have been in the case in question.

LARGE FAMILIES AMONG THE POOR.

AT an inquest held on Dec. 2nd by Dr. Wynn Westcott at Bethnal-green on the body of an infant found dead in bed the mother of the deceased mentioned that she had fifteen children. The coroner remarked that he could not understand how it was that the poor managed to keep such large families, whereupon a juror remarked: "One or two don't make no difference. Some grow up and help to keep the others." After all, there may be more sound sense in this argument than might at first sight be supposed. Everyone who has any experience of work among poor people knows how kind the poor are in taking in an extra child for nothing very often, and sometimes for a small weekly payment. We do not, of course, refer to baby farmers, but as a matter of fact the charity of the poor to one another is above all praise, and so perhaps the large family may not be so undesirable after all. The great difficulty in connexion with such is not so much clothing or feeding but proper house-room, and to find this with the exorbitant rents which are being daily demanded in London is almost impossible.

THE ANNUAL REPORT OF THE ARMY VETERINARY DEPARTMENT.

THE usual annual report of the Army Veterinary Department has recently been completed by the Director-General, Veterinary-Colonel Duck, C.B., F.R.C.V.S. It consists of a general summary of the diseases met with amongst the army horses and transport animals at home and abroad. In the Home Department the number of patients amounted to 65·12 per cent. of the average strength, being greatest in the Army Service Corps which has the Young Horse Depôt attached to it and lowest in the Military Police. It was noticed, as has been the case before, that the percentage of admissions to treatment was higher in horses about four or five years of age than in those of more mature years. It is a matter of great congratulation to know that glanders is still absent. One suspicious case occurred amongst the animals at Shorncliffe in November, 1897, but a careful post-mortem examination and the use of the mallein test amongst the in-contact horses demonstrated beyond dispute that the disease was not glanders. In Egypt, from which country the report is made by the senior veterinary officer, Veterinary Captain Blenkinsop, the absence of glanders is also noted, although 69 cases of this disease were reported by the Egyptian civil authorities. The Government stables, however, had a narrow escape from becoming a centre of contagion, as a private pony standing in one of them showed suspicious symptoms and after reacting to mallein was destroyed, the necropsy confirming the existence of the disease. All the animals in the same stable were promptly tested, but none reacted and the disease has not again reappeared. Veterinary-Captain Blenkinsop suggests that remount horses and mules are largely obtained from Syria, where glanders exists to some considerable extent, all animals should be tested before being admitted to the troop stable. In South Africa outbreaks of glanders occurred at Etchowe or Pietermaritzburg. Mallein was employed and all animals which reacted were destroyed. Every precaution was adopted and the disease appears by the last reports to be stamped out. Mortality from "horse sickness" was very heavy and an unusually large number (no less than 119) of animals died from colic due to the ingestion of large quantities of sand. The latter cases occurred at Ladysmith, where the animals were picketted out in the open on a sandy soil which they continually licked, the sand accumulating in the intestine and causing complete obstruction. In the Army Veterinary School the usual classes were held for officers and farriers, examinations being held and certificates granted to those who were successful. From the Vaccine Institute lymph was issued for 71,103 people, the average yield from each calf being sufficient for 4345·25 persons, the total expenses for the year, including cost of calves, instruments, &c., being only £91 9*s.* 3*d.* Lymph is now supplied from here to the navy as well as to the army, a request to that effect having been received from the Admiralty.

BILATERAL ACUTE LABYRINTHITIS.

IN the *Intercolonial Medical Journal of Australasia* of Oct. 20th Dr. Percy Webster relates a case of this very rare disease. A healthy lad, aged ten years, one day looked pale and ill. He vomited, became delirious and complained of pain in the head; he had to be held down in the bed. The acute delirium lasted 11 hours, after which he was quiet but lay muttering. He called out with pain when touched; moving the limbs seemed to cause great suffering. At times he would lie with his back arched and his head retracted. He was ill for about two months and became very thin. He had giddiness and after his recovery staggered at times especially in the dark. Deafness was noticed before he recovered from the delirium and remained permanent; it was total both for bone and aerial conduction. He complained of pain and constant buzzing in his ears. The fundi were normal, the knee-jerks were active, and there was neither ankle clonus nor paralysis. As the history was only obtained from his friends it was impossible to say whether the labyrinthitis was primary, or associated with meningitis, pneumonia, typhoid fever, or one of the exanthems, or whether it was secondary to otitis media.

THE PURPURA OF CHILDHOOD.

AT the recent Congress on Gynæcology, Obstetrics, and Diseases of Children, held in Marseilles, Dr. Leon Perrin discussed the pathological significance of purpura in children. This term, he reminds us, no longer stands for the name of a disease but of a symptom. The condition of blood-stasis which it denotes, whether merely an intense congestion with capillaries unruptured or a true extravasation, is in the great majority of cases due to an infective process—a toxæmia. Even the rheumatic variety, he maintains, ought to be relegated to the same series as those of obviously septic origin as being also toxic, though by means of a different toxin. Purpuras associated with syphilis, with the eruptive and other infectious fevers, with septic pleurisies and pneumonias, are necessarily of this character. In the same connexion a reference to two cases in which the presence of staphylococci was demonstrated in the blood is interesting. Dr. Perrin also quotes the observations of de Boeck-Renher, Hutinel, Le Gendre, and others to prove the frequency with which the tonsil serves as the chief point of entrance for the germs of disease. But whether this gland, or the skin, or the gastro-intestinal canal provides the nidus, the later action of toxic products

is essentially the same in all cases. They penetrate the tissues, alter the composition of the blood, and by attacking either directly the capillaries or indirectly the vaso-motor centres reveal their presence by the sign of purpura. Neither is the influence of the non-vital agents without significance in this connexion. Various drugs—mercury, iodoform, arsenic, and others—afford the same purpuric signs after a period of use and they doubtless act by means of the same physical mechanism. Cachectic and other allied morbid states also do this by developing a variety of auto-toxins. Purely physical and metaphysical forces—as cold, emotion, &c.—have, on the other hand, merely a predisposing effect. Not the least interesting details in this interesting paper are those relating to age. Purpura, as is well known, is very frequent in childhood, more so than in adult life. In this respect it resembles the eruptive fevers. From four to ten years is the most usual age-period for its appearance, though it is fairly common up to twenty. Dr. Perrin, however, quotes cases observed by Steffen some of which occurred at a much earlier stage of life—viz., 1 at thirty-six hours, 1 at eight days, 1 at a fortnight, 1 at six weeks, and 16 from three to nine months after birth.

ALLEGED ILL-TREATMENT OF A PATIENT AT THE LONDON HOSPITAL.

THE evidence given at an inquest held by Mr. W. E. Baxter at the Whitechapel Infirmary last week should certainly cause the governing body of the London Hospital to institute an inquiry in reference to a patient whom the evidence showed to have been turned out of the hospital into the street in a very unusual manner. Dr. Frazer stated that the man was admitted into the hospital on Thursday, Nov. 3rd, "but behaved so indecently that at last the nurses refused to go near his bed." The witness, however, at a later stage of the inquiry amended this statement by saying: "What I really meant was that I felt inclined to refuse to allow the nurses to attend the patient on account of his behaviour." Dr. Frazer also stated that the Whitechapel Infirmary and two other infirmaries had been applied to and in each case admission was refused to the deceased. As far as the first-named nstitution was concerned it was proved that that statement was incorrect. The patient was, in fact, led outside the gate of the hospital by a porter, when he sat down on the pavement until found by a policeman who removed him to the infirmary where he died from "softening of the brain." A porter from the London Hospital stated that he informed a constable on point duty outside Whitechapel railway station that the deceased was going to be put out of the hospital. The jury returned a verdict in accordance with the medical evidence, and added: "We desire to express our deep sorrow at the way the poor fellow was turned out of the hospital, and we are of opinion that the house governor of the hospital acted in a very high-handed manner in having the man expelled in such a casual way without seeing that he was properly attended to outside." With the evidence at present before us we are forced to agree with this reprimand, but we trust that further investigation will show that the action of the authorities was not so hard-hearted as it appears. All who have had experience in hospital management know how difficult it is to deal with such cases at a general hospital, and young house physicians and house surgeons acting with perfectly good intentions are occasionally apt to turn patients over to the police without due examination of their mental condition. It should have been remembered that indecent language and behaviour are very common symptoms of insanity, and the house governor should have ascertained whether the physician in charge of the case was of the same opinion as his junior before consenting to the man being turned out into the street. Such an event is likely to cast discredit upon the management of a most noble institution and a satisfactory explanation should be as widely spread as the report of the verdict of the jury has been.

THE WATER-SUPPLY OF EAST LONDON.

THE East London Waterworks Company resumed the constant supply in Poplar, Limehouse, Millwall, Ratcliff, Bromley, Loughton, Chingford, Chigwell, and Buckhurst Hill on Monday last and the directors have stated their confident expectation of returning to the constant supply in every part of their district by the end of the present week.

THE BERTILLON SYSTEM OF MORTALITY STATISTICS.

A DECISION the importance of which can hardly be estimated as yet was reached at the recent meeting of the American Public Health Association, held at Ottawa, Canada, in September last. The following resolutions, which had been submitted by the Committee on Vital Statistics at Philadelphia in 1897, were favourably reported by the Executive Committee and were then unanimously adopted by the association: The American Public Health Association recommends that the Bertillon classification of causes of death be adopted by all the registrars of vital statistics in the United States, Canada, and Mexico as soon as the change from the systems now in use can be conveniently made. The Committee on Nomenclature of Diseases and Forms of Statistics (now the Committee on Demography and Statistics in their Sanitary Relations) has been authorised to have printed and circulated amongst the registrars of the three countries a circular containing these resolutions, the report of the committee on which they are based, the three alternative forms of the Bertillon classification, with explanatory notes on inclusion of terms and practical rules for compilation, and a list of the registration offices adopting the same. A proposal will be made for an international allfance between the registrars of the three countries included in the association and the registrars of France and other countries now using, or which shall hereafter adopt, the Bertillon system, and definite plans for such an alliance are to be submitted for action to the next annual meeting of the association.

"TYPHOID PLEURISY."

THE *Semaine Médicale* of Oct. 19th contains a valuable paper by M. Achard on this subject. Pleurisy occurring in typhoid fever may result from the action of the typhoid bacillus or from some other infection. Typhoid pleurisy may assume several forms—sero-fibrinous, hæmorrhagic, or purulent. In some cases the pleurisy seems to have preceded the typhoid fever just as typhoid pneumonia may. The effusion may also show itself during the course of the disease. Thus a man, aged twenty-six years, with all the usual symptoms of typhoid fever, had dyspnœa and dulness at the base of the left lung. Puncture showed the presence of fluid a little cloudy and containing red and white corpuscles. On several occasions during a month serous fluid was obtained by puncture which always contained the typhoid bacillus in pure culture. The signs disappeared and he recovered. In another case, in a young woman, an empyema formed. At the end of the third week there was a friction sound at the left base; the temperature fell to normal and convalescence was apparently insured, but dulness was found at both bases and pyrexia again appeared. An empyema formed on the left side. A litre of pus was evacuated which contained the typhoid bacillus in pure culture. Resection of a rib and drainage were carried out and the patient recovered. Why does the typhoid bacillus

produce pus in some cases and not in others? A categorical answer cannot be given, but analogous cases can be cited. The swellings of osteo-myelitis are sometimes abortive and resolve without suppuration. The spleen is constantly the seat of bacillary foci in typhoid fever, but abscess results only exceptionally. In experimental inoculation of the typhoid bacillus pus is sometimes produced, sometimes not. The same is true of the colon bacillus. Again, streptococci and staphylococci, microbes usually pyogenic, are sometimes present in non-suppurative lesions. Finally—a very complete analogy—the tubercle bacillus can induce fibrinous, serous, hæmorrhagic, or purulent pleurisy. As to the treatment of typhoid empyema M. Achard recommends postponing operation until the intestinal ulcers are healed and the patient has recovered strength. This course is possible as typhoid empyema as a rule does not run a rapid course and has not a tendency to invade other parts or to give rise to general infection—septicæmia, for example—as has empyema induced by streptococci.

THE PRINCE OF WALES'S HOSPITAL FUND FOR LONDON.

IN accordance with the plan set forth by His Royal Highness the Prince of Wales a Committee of Inquiry has visited the various hospitals which applied for a share in the Prince of Wales's Hospital Fund in the summer. The committee was composed of nearly equal numbers of medical men and laymen, if we exclude Sir Trevor Lawrence who may be reckoned as both, and its report will doubtless when issued be of great service to the Distribution Committee in allocating the Fund to those institutions which are not only needy but deserving. The Executive Committee of the Fund, of which Mr. Hugh C. Smith, the Governor of the Bank of England, is treasurer, has issued an appeal for funds, apparently based upon information received from the Committee of Inquiry. A sum of £30,000 is still wanted to meet the minimum necessities of the hospitals for the present year. Last year the Prince of Wales's Fund was the means of opening 180 beds which before had remained closed for want of money. We are glad to see that the appeal points out that it is wasted generosity to build new wards and hospitals when so many of the existing wards are perforce empty and useless. The Sirdar has within a very few days managed to collect the sum of upwards of £70,000 for the Gordon Memorial College in the Soudan. We congratulate his lordship most heartily on the success which his efforts have attained, but we would remind those who are blessed with this world's goods as well as those who are not rich that the needs of the sick poor are paramount. We cannot but also remind the authorities responsible for the management of our metropolitan hospitals that a great deal of their charity is expended not only upon unworthy objects, but also upon people from all parts of the country who could be just as well treated nearer their own homes.

THE INDIAN AND COLONIAL ADDENDUM TO THE BRITISH PHARMACOPŒIA OF 1898.

IT is not often that it is possible to criticise material for publication which has not yet reached a final stage. This opportunity has been afforded by the receipt of the report from the Pharmacopœia Committee on the proposed Indian and Colonial Addendum to the British Pharmacopœia of 1898. This report contains suggestions for consideration by the medical and pharmaceutical authorities in India and the colonies and these suggestions cover some twenty-two pages. These pages include a list with descriptions of drugs already proposed by Indian and colonial authorities for official recognition, but the most cursory consideration of the information indicates that many of the descriptions are avowedly imperfect, while in some places no description of any kind is given. It would appear, however, that these pages have to be transmitted to various medical and pharmaceutical bodies in India and the colonies with the aid of Her Majesty's Privy Council and it has therefore been deemed essential that this raw material should be passed and approved by the General Medical Council. The suggestions evidently are to be regarded only as a first rough sketch, which is to be finished with the coöperation of the Indian and colonial authorities who are requested to criticise and amend the descriptions and to give such other suggestions as may be deemed desirable to render the Pharmacopœia, with this addendum when complete, an authority which shall meet the requirements of the various colonies and dependencies. There is, however, even in this incomplete form abundant evidence that the drugs here mentioned are not intended as mere substitutes for drugs entering into preparations now official. They are intended only for local use and therefore possess very little interest for has practitioners in this country.

THE Peninsular and Oriental steamer *Caledonia* arrived at Plymouth on Dec. 7th, having come direct from Bombay without calling at any Mediterranean port. While in the Red Sea two Lascars developed symptoms of plague. They were landed at Suez and no further outbreak occurred. Dr. Bulstrode from the Local Government Board and Mr. F. M. Williams, the port medical officer, boarded the *Caledonia* immediately she arrived in the Sound. All the crew and passengers were inspected and 160 of the latter who landed at Plymouth had their names and addresses forwarded to the local authorities of their respective destinations. The ship then proceeded to London.

THE Church Society for the Promotion of Burial, Funeral, and Mourning Reform recently appealed to the Prime Minister to carry out the recommendations of the Select Committee on Death Certification. Lord Salisbury has promised to give the matter his attention.

THE Queen has given to Edward Divers. M.D., Professor in the Imperial University, Tokio, Japan, Her Royal licence to accept the Insignia of the Imperial Order of the Sacred Treasure of the Second Class, conferred upon him by the Emperor of Japan.

AT the Quarterly Court of Governors held on Dec. 7th, it was unanimously agreed to elect Mr. Frederick Treves a consulting surgeon to the London Hospital. Mr. Treves has been a surgeon to the hospital since Sept. 23rd, 1879.

THE annual general meeting of the constituents of the Metropolitan Hospital Sunday Fund will be held at the Mansion House, E.C., on Monday next, Dec. 12th, at 3 P.M.

BRIGHTON, HOVE, AND SUSSEX THROAT AND EAR HOSPITAL.—This hospital, the first portion of which has just been erected, was opened by his Grace the Duke of Norfolk on Nov. 29th. The building is from the designs of Mr. Cawthorn, architect, of North-street, Brighton, and the exterior is treated with red brick and terra-cotta. The site is upon the slope of a steep hill at the upper part of Church-street, Brighton, and the building consists of five floors. The out-patient department occupies the ground floor. The first floor has a ward for males with eight beds and the operating theatre is on this floor, the walls being tiled and the floor of marble terrazzo paving. The ward for females with eight beds is on the next floor and there are several detached rooms to be used as separate wards as well as nurses' rooms, &c., on each floor. On the top floor are the rooms of the servants and night nurses.

QUACKS AND ABORTION:

A CRITICAL AND ANALYTICAL INQUIRY.

I.

IT has been for some time past a matter of comment that a large number of advertisements are published in newspapers in this country inviting women to purchase nostrums therein referred to for the purpose of removing what are usually described by the advertisers as "irregularities," "suppressions," and "obstructions," the irregularities, suppressions, and obstructions meant being clearly those of the menses. The advertisement as a rule claims to deal with obstructions, &c, arising from *all* causes and the impression left upon the medical reader is that many of these advertisements are thinly veiled invitations to purchase and to use the advertised articles for the purpose of procuring miscarriage, pregnancy being not only the most common but the only common cause of the cessation of the menstrual flow. We shall later discuss the question of the frequency of amenorrhœa from causes other than pregnancy and the desirability of treating the condition with a quack medicine regardless of the causes from which it may have arisen. The obvious aspect of these advertisements is the more important. To this we turn first.

Recent trials have drawn considerable attention to the subject of criminal abortion and the law affecting it, and it was evident even before the arrest of certain persons yet to be tried upon a charge of alleged blackmail that the procurement of miscarriage was not the only criminal practice which might be facilitated by the publication of the advertisements in question. In these circumstances their continued appearance with impunity and profit (for advertisements are not inserted gratis, even by the most needy periodicals or paid for year after year if they do not bear fruit) seemed remarkable, and we decided to inquire whether this could be accounted for by any defectiveness in the law or by some misconception of our own as to the facts. We may also say that we had not only resolved upon making the inquiry that now follows before the persons at present awaiting trial attracted the attention of the law, but we had actually commenced our inquiry, having obtained the materials for the greater part of the laboratory tasks which form part of this investigation.

With regard to the law, by 24 & 25 Vict. cap. 100, sect. 58, "Every woman being with child, who, with intent to procure her own miscarriage, shall unlawfully administer to herself any poison or other noxious thing ..... and whosoever, with intent to procure the miscarriage of any woman whether she be or be not with child shall unlawfully administer to her or cause to be taken by her any poison or other noxious thing ..... with the like intent shall be guilty of felony, and being convicted thereof shall be liable ..... to be kept in penal servitude for life," &c. By Section 59 of the same Act, whosoever shall unlawfully supply or procure any poison or other noxious thing ..... knowing that the same is intended to be unlawfully used or employed with intent to procure the miscarriage of any woman, whether she be or be not with child, shall be guilty of a misdemeanour, and being convicted thereof shall be liable to be kept in penal servitude for the term of three years, &c. By 24 and 25 Vict. cap. 94, sect. 1, accessories before the fact to a felony are punishable as if they were principal felons, or may by Section 2 be charged as substantive felons if they have "counselled, procured, or commanded" any other person to commit any felony. It seemed, therefore, fairly clear that the persons to whose advertisements we have referred, should they *in fact* carry on an unlawful trade, were tolerably well provided for by the law, while their customers shared their susceptibility to legal process. It became important, therefore, to ascertain with certainty whether the business of selling these nostrums was of the nature which in our view the advertisements suggested and were intended to suggest, or whether the business was correctly indicated by that to which we have referred as being rather a thin veil designed to protect it from too curious observation[1]

In order to make our meaning quite clear we give three advertisements.

Ladies, Consult Madame Wood, LADY SPECIALIST ON ALL FEMALE AILMENTS, IRREGULARITIES, AND OBSTRUCTIONS, however obstinate. Save Time, Trouble, and Expense by consulting an Experienced Specialist AT ONCE. My Remedies are the most powerful and strongest on earth, effectual after all others have failed. May be taken by the most delicate. A lady writes: "NONE HAVE EVER DONE ME ANY GOOD BUT YOURS, NOTWITHSTANDING THEIR SO-CALLED TESTIMONIALS." Madame Wood may be consulted daily, or by letter, enclosing stamped envelope. Price of Mixture 4*s.* 6*d.*, extra strong 11*s.*, secretly packed. By post 3*d.* extra. 20, GREAT AVENHAM-STREET, PRESTON, LANCASHIRE.

Ottey's Strong Female Pills quickly and certainly remove all OBSTRUCTIONS arising from any cause whatever, where Steel and Penny Royal fails. Invaluable for married women. By post, under cover, for 14 and 33 stamps, from THOMAS OTTEY, Chemist, 32, Hagley Road, Birmingham. Please mention the *Derbyshire Times*.

Apiol and Steel Pills for Ladies.—A French Remedy for all Irregularities. Obtainable only from Martin, Chemist, Southampton. Price 4*s.* 6*d.*, post free.

Any one who cares to see more of this sort of stuff than we have space to print will find it in the files of some London daily papers and of country newspapers which have a large circulation among outwardly respectable people, but chiefly in certain Sunday or weekly papers, in small provincial sheets, and in other publications which from their nature are read by those female members of the community most likely to feel the need of the relief promised and least likely to hesitate in accepting the specious offers made to them. Since the commencement of the magisterial inquiry into the charges of alleged blackmailing these advertisements we notice have been omitted from some at least of the papers which usually devoted considerable space to them, and in others they are less conspicuous than formerly. They have not, however, wholly disappeared, nor does it seem to us likely that they will unless their character is fully brought home to the police whose duty it is to prevent crime, and to newspaper proprietors who are presumably not desirous of assisting the commission of crime even when they are content to make a profit and plead ignorance of the true nature of its sources. In any case the trade, though it may be considerably crippled if it cannot be advertised in the newspapers, will probably go on to some extent, and it is well that what the trade is should be thoroughly understood by all. It will be seen that no advertiser employs the word "miscarriage" or invites his customers to "try our pills for abortion," but we do not expect to be contradicted when we say that some at least hardly attempt to cloak their obvious meaning under any pretext, while others, no doubt, vaguely or in terms refer to irregularities of menstruation not necessarily arising from pregnancy. It will occur, however, to anyone reading with the most open and unprejudiced mind that whatever they are capable of effecting, and whatever effect their vendors, if pressed to be explicit, might claim for them the goods advertised are liable to be bought without inquiry by ignorant women anxious to rid themselves secretly of possible offspring.

The compounds therefore which we are discussing and of which we have purchased a selection (now before us) must fall under one of two heads, each having two subdivisions—except in so far as some may be sold indifferently for the two purposes. These heads and divisions are: I. Professed emmenagogues (*a*) efficient and (*b*) non-efficient. II. Professed abortefacients (*a*) efficient and (*b*) non-efficient. It is also clear that the question whether an individual nostrum falls under head I. or head II. is one of inference from the circumstances of sale and from the interpretation of the advertisement or of the documentary matter accompanying it when sold; while the question of the subdivision in which it is to be classed according to its efficiency or non-efficiency must depend upon analysis of the nostrum itself.

Believing the whole matter to be of importance to the public and to the medical profession we have purchased their pills or mixtures from a large number of the most prominent advertisers.[1] This has been done, as a rule, in the first instance by the writing of a letter in the character of a servant or woman of humble station enclosing payment and

[1] To prevent error we would point out that the remarks which follow refer to such advertisers as a body and not to the three persons whose advertisements we happen to have singled out for notice above.—ED. L.

asking for the goods to be packed secure from observation; while in some cases the thing advertised has been simply ordered and paid for. Occasionally where a second letter has been written pregnancy has been avowed. We have made analyses of a considerable number of the pills and potions we have received and the results of our analyses we propose to submit in detail to our readers together with extracts from the printed or written matter which in all cases accompanied the goods sent. Before doing this, however, there are one or two points to which reference may conveniently be made now, because they are in the nature of criticism of features which occur frequently in the printed promises of the vendors, and because to treat of them at once will clear the ground and prevent repetition hereafter.

The printed matter accompanying the boxes and bottles sent out by these persons leaves little doubt as to what the vendors profess to sell, or are willing to be understood to sell, as long at least as buyers will send their orders without specifying too closely what they require. For example, where a box of pills is accompanied by a leaflet which announces others, "extra strong, 11*s*.," and others, "special strong, 22*s*." and on the same paper is recommended a "Positive Preventive, a Compound Quinine Injection that Never Fails," no one can help drawing conclusions adverse to the advertiser, while the inference is not weakened by finding an "Invaluable Book for Women" recommended below with the title, "How to Limit Your Family, and Woman her Complaints." Whatever such an advertiser may sell actually, or whatever he may possibly declare the object of his sale to be if closely pressed, it is fairly obvious that many pregnant women would purchase his "special strong" pills at 22*s*. with one idea only in their minds. Another advertiser, however, a lady, leaves less room for doubt as to her interpretation of the word "irregularities."

Her catalogue concludes with a list of her "Infallible Safeguards for Preventing Irregularities." These we find to be—

"Soluble Pessaries (wife's use),
"Rubber Preventives (husband's use), and
"Preventive Pessaries (wife's use)."

This page, which contains further details of similar character, would not be legal evidence against any other person, but we cannot help believing that emanating from one in the trade it supplies the trade meaning of an ambiguous term.

Another point frequently observable in the literature of this trade is the recurrence of a warning to the effect that "this must not be taken by those expecting to become mothers." We find it, for instance, on the first leaflet referred to above, that of the author of "How to Limit your Family and Woman her Complaints." It is a notice which may be interpreted in two ways. It may be taken as a warning that what is sold as an emmenagogue should not be used by a pregnant woman because it is also an abortefacient. Or it may be in some cases an indication of the alleged character of what is sold which is purposely given to serve as an invitation to unlawful practices. In either case it is likely that a pregnant woman, ignorant and desperate, may purchase the "remedy" without further question in hopes that it may induce miscarriage.

The third general feature of the printed matter to which we have to allude is the character of the testimonials. These, as in the case of most patent medicines, occupy a considerable space in the various booklets and leaflets circulated by the vendors and as in the case of most patent medicines they show that if they are genuine the quack cannot complain of ingratitude on the part of his customers. Indeed, it is this particular point of gratitude to which we wish to call attention. Many of our readers have no doubt met with grateful patients; many, too, have attended women with success whose menses have from various causes (not including pregnancy) become scanty or altogether absent. Have any of them in the circumstances received such letters as these?

DEAR ——,—It gives me great pleasure to say that after taking the first bottle of your wonderful medicine all came about as I desired after eleven weeks of misery and anxiety.

DEAR ——,—I was delighted to find myself all right last night after finishing the "specific." My anxiety and suspense for nearly four months cannot be described. Such a friend as you would indeed be difficult to find. I had given up all hope. Many, many thanks for your noble letter and wonderful medicine.—Gratefully yours,
MRS. ——.

DEAR ——,—I now take the pleasure in writing you these few lines and glad to say that the pills have done me good for now I am alright. I am sending now for Dr. ——'s pessary. With my best wishes for your pills.
MRS. ——.

We have only to add to this last letter that Dr. ——'s pessary is described lower down as a "real preventative of conception."

It must not be supposed that we have made an exhaustive inquiry into the materials used by each and every advertiser whose wares are proclaimed in suspicious terms; they are too numerous. Some no doubt trade under many names, but still there are evidently scores of persons who seek to get a living by—to use their own term—curing irregularities in women. Some are not as bad as others. Some, no doubt, who advertise "female" pills do not even profess to deal with pregnancy at all and are not desirous of being thought to do so. They reiterate the maxim that "prevention is better than cure" and trade principally in what are known as Malthusian appliances—one of them including among these appliances an apparatus for irrigating what he terms the "virginia."

One incident struck us as material in its bearing on the promise of secresy made by so many of the advertisers. We received a pamphlet, while we were in communication with the more prominent advertisers, advocating certain pills, the sender being a person to whom we had not written at all and whose name was unknown to us. The explanation was apparently contained in a passage printed therein: "I am not connected with any other firm whatever. I only buy the names and addresses of others who profess to cure you and cannot." We are sorry for those who write in more genuine need than ourselves if this trade in names and addresses is largely practised. We did not write for any of the wares, and shall make no further reference to the pamphlet than to quote a passage from it which speaks volumes for the general culture and technical knowledge of its author: "Many long years of my life, full of travel and experience, has been devoted to the study of the best method of curing female obstructions and irregularities, suppressed courses, anæmia, amenorrhœa, catamenia, dysmenorrhœa, emmenagogue, chlorosis, epistaxis, systolic murmurs, &c.; and I am not egotistical when I say with all truth that I have been successful beyond my dreams."

In our next article we shall proceed to the analysis of certain pills and potions and the discussion of the professions of some of the vendors. In some instances, at all events, it will be found that the analysis and the words of those who for years have advertised their goods so openly in the press leave no question as to the qualities claimed for them.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

AN extraordinary meeting of the Comitia was held on Dec. 1st, Sir SAMUEL WILKS, Bart., President, being in the chair.

A Licence to practise physic was granted to Mr. J. J. Urwin, Glasgow and Leeds.

The PRESIDENT announced that he had invited Dr. Poore to be the Harveian Orator for 1899 and Dr. Foxwell of Birmingham to be the Bradshaw Lecturer.

The following communications were received:—

1. From the Board of Trade, Nov. 11th, requesting the College to appoint two members of a committee for revising the Medical Scales of Passenger Ships. Dr. Tirard and Dr. Sidney Phillips were asked to represent the College.

2. From St. Bartholomew's Hospital Medical School, Oct. 28th, on the Effect of the New Regulation of the Conjoint Board with respect to the Period of Dissections. Dr. CALVERT and Dr. CURNOW made a few observations, but the PRESIDENT said he thought it was not the time to discuss the question in full. It had been before the Royal College of Surgeons of England and would come before the Committee of Management. The REGISTRAR moved that the letter be referred to the Committee of Management and that discussion should be postponed until their report was received. This was carried. A letter from Dr. Isambard Owen was also referred to the Committee of Management. The PRESIDENT hoped the deans or wardens of the other medical schools would also express an opinion on the subject and report to that committee.

3. From the Imperial Military Academy of Medicine at

St. Petersburg, Oct. 30th, inviting the College to send representatives to the celebration of the centenary of its foundation on Dec. 18th (30th N.S.), 1898. The President undertook to invite some one to represent the College.

4. From the London County Council, Nov. 11th, thanking the College for the report of the Special Committee on Infectious Puerperal Diseases.

5. From the Queen Victoria's Jubilee Institute for Nurses, Nov. 2nd, informing the College of Her Majesty's approval of Sir Dyce Duckworth as representative of the College.

6. From the Secretary of the Royal College of Surgeons of England, reporting certain proceedings of their Council on Nov. 10th.

7. From the Charity Commissioners, reporting the Scheme for the Management of the Chelsea Physic Garden. The scheme provides:—1. For the maintenance of the garden and laboratories. 2. For instruction in and investigation of pharmacology, &c. 3. For the appointment of administrators and trustees and a committee of management. As it at present stands the scheme provides that the College should send one representative alternately with the Society of Apothecaries of London; Dr. HENSLEY proposed, and Dr. LAUDER BRUNTON seconded, a resolution that a request should be sent to the Charity Commissioners that the College and the Society of Apothecaries of London should have the same representation as the Royal Society. This was carried.

A report was received from the Committee of Management containing the synopsis of practical pharmacy, and also a request that the committee should be empowered to consider the question of an examination in practical physiology, to take the opinions of the several medical schools, and to report to the Royal Colleges on a future occasion.

A report was received, dated Nov. 7th, from the Leprosy Committee appointed on Oct. 27th. The report was as follows:—

Your committee beg leave to report as follows:—

That the communicability of leprosy, by direct or indirect means, from lepers to the healthy, must now be accepted as an established fact, the evidence in support of this belief being conclusive; and that there is no evidence of the disease arising or spreading in any other way.

Your committee are therefore of opinion that the conclusions stated in a resolution unanimously adopted by the Conference on Leprosy held at Berlin in October, 1897, and set forth at p. 194 of the official report of the Conference, ought to be accepted in their entirety.

This resolution is in the following words:—

[*Translation.*]

1. In all countries in which leprosy occurs in *foci* or is widely distributed isolation is the best means of preventing the spread of the disease.

2. The system of compulsory notification, supervision, and isolation as carried out in Norway should be recommended to all nations possessing local self-government and an adequate number of physicians.

3. It must be left to the legally constituted authorities, after consultation with the sanitary authorities, to determine the special regulations which must be adapted to the special social conditions [of each country].

But your committee would dwell with especial emphasis upon the last paragraph of that resolution, recommending careful consideration of the social and political conditions of each particular country.

An animated discussion followed as to whether all forms of leprosy should be included and whether the recommendations should apply to this country. Several Fellows expressed their opinions or offered suggestions, including Sir William Broadbent, Dr. Radcliffe Crocker, Dr. Cullingworth, Sir R. Douglas-Powell, Sir William Gowers, Dr. Heron, Dr. Payne, and Dr. Poore. Finally Dr. RADCLIFFE CROCKER moved and Sir WILLIAM GOWERS seconded:—

That the report be referred back to the committee to make it clear that Clause 2 [in the "Translation"] only applies to countries mentioned in Clause 1.

This resolution was carried.

A report, dated Nov. 9th, was received from the Committee on the Notification of Infectious Puerperal Diseases under the Public Health (London) Act, 1891, appointed on Oct. 27th. The report was as follows:—

That this committee is of opinion that, with a view to the limitation of dangerous infectious diseases, the London County Council would be acting rightly in adopting the view that the expression "puerperal fever," as contained in Section 55 (8) of the Public Health (London) Act, 1891, should be taken to include septicæmia, pyæmia, septic peritonitis, septic metritis, and other acute septic inflammations in the pelvis occurring as the direct result of childbirth.

This report was embodied in a letter which was approved and signed by the President and forwarded to the London County Council.

The President then dissolved the Comitia.

THE ROYAL COMMISSION ON THE METROPOLITAN WATER-SUPPLY.

THE thirty-eighth sitting of the Royal Commissioners was held at the Guildhall, Westminster, on Nov. 29th. The Commissioners present were Lord Llandaff (chairman), the Right Hon. John William Mellor, Sir George Barclay Bruce, Mr. de Bock Porter, Major-General Scott, and Mr. Robert Lewis.

The examination of Mr. REGINALD MIDDLETON occupied the whole of the sitting and the witness put in a large number of tables referring to the cost of the water from Wales and the cost of reservoirs necessary for the scheme for taking an increased supply of water from the Thames. With regard to the cost of the Welsh scheme the witness gave an estimate founded on the cost of the Manchester, Liverpool, and Birmingham supplies.

In preparing the estimates the witness calculated the cost of head works, including dam, land, compensation, and 81 miles of conduit, at the rate of £91,611 per million gallons of supply; the remaining 81 miles of aqueduct, including land and easements, to deliver 215 million gallons daily, were calculated at £64,000 per mile. The mains between the several reservoirs were estimated at prices similar to those for similar works elsewhere. The pumping machinery was charged in the same proportion to the actual quantity of water pumped from the level at which it could be delivered by gravitation from Elstree to the higher zone as is used for the Thames reservoirs scheme. The charges for pumping from the level at which water can be delivered to the service reservoirs of the companies from Elstree are charged on the amount of water which may be pumped from these levels at 30*s.* per million gallons actually pumped.

The Manchester supply from Thirlmere, with an aqueduct about 96 miles in length, is designed to give a supply at the rate of 50 million gallons a day and will, when completed, cost £4,400,000. In the case of the Welsh supply the aqueduct is about 162 miles in length and its cost will be proportionately greater. To this again must be added the cost of the service reservoirs at Elstree, the mains and connexions between that point and the service reservoirs of the companies, pumping plant, and the cost of pumping to supply, as well as, under certain conditions, the cost of filter beds.

If the Liverpool waterworks be taken for comparison it is found that the cost of the works to supply 40 million gallons daily, with an aqueduct of about 67 miles in length, will be, when completed, £3,900,000.

The estimated cost of the Elan Valley works, to deliver 75 million gallons of water daily, with an aqueduct 80 miles in length, is £6,500,000. The cost per million gallons of supply is: Thirlmere, £88,000; Vyrnwy, £97,500; Elan Valley, £89,333; average cost per million gallons of supply, £91,611. The lengths of the several aqueducts are: Thirlmere, 96 miles; Vyrnwy, 67 miles; Elan Valley, 80 miles; average length of aqueducts, 81 miles.

The length of the proposed aqueduct from the Yrfon to Elstree is stated to be 162 miles. It is therefore 81 miles longer than the average length of the other three aqueducts.

A very large number of tables were handed in with reference to the cost of the Thames scheme and that of the Welsh scheme. For one comparing the cost of the Thames and Welsh supply we hope to find space at an early date.

Lord ROBERT CECIL cross-examined the witness on behalf of the Hertfordshire County Council. The examination had reference to the springs and wells in Hertfordshire.

The thirty-ninth sitting of the Royal Commission was held at the Guildhall, Westminster, on Dec. 5th.

Mr. BALFOUR BROWNE, on behalf of the London County Council, cross-examined Mr. Middleton. Mr. Balfour Browne contended that it would be more costly to carry out the Staines reservoirs scheme in its entirety than to go to Wales for an adequate supply of water for London.

The next sitting of the Royal Commissioners will be held on Monday next, Dec. 12th.

A NEW infirmary to provide for the treatment of patients mentally afflicted was opened by Mr. John Penn, M.P., on Tuesday, Dec. 6th, at High-street, Lewisham, for the guardians of the poor of the Lewisham Union.

THE DENTAL HOSPITAL OF LONDON.

THE committee of management of the Dental Hospital of London, Leicester-square, are at length in a position to state that the building of the new hospital on a site adjacent to the old and very inadequate building has actually been started. Some interesting particulars of the progress of the funds for the purpose afforded several speakers at the annual dinner of the staff and past and present students of the hospital, which was held last Saturday in the Whitehall-rooms of the Hôtel Métropole, an appropriate subject of discussion. The chairman, Mr. Storer Bennett, F.R.C.S.Eng., led the way and he was followed by Mr. Trimmer, Mr. Allen Stoneham, Mr. Lloyd-Williams, and others. There was an excellent attendance, amongst those present being representatives of the staffs of the London medical schools. It appears that the efforts of the committee to acquire the new site and to secure the commencement of building operations have been considerably hampered by the requirements of parochial authorities and of the London County Council. The vestry of St. Martin's-in-the-Fields, for example, in order to improve the access to Leicester-square purchased some of the houses adjacent to those possessed by the hospital and the demolition of these rendered the whole block unsafe and the entire site had to be cleared by order of the London County Council. This means a loss to the Hospital funds of £1200 per annum and it was therefore necessary either to mortgage or abandon the site. The committee decided in favour of the former expedient and the mortgage has to be repaid in annual instalments of £1700 with interest, so that this sum of money has to be raised in addition to the money required for ordinary maintenance. The plans of the new hospital have, however, been approved by the London County Council and the Charity Commissioners having given their consent the building has now been begun. It is hoped that it will be ready for occupation in about two years' time. We are able to reproduce from the architect's drawing a sketch of the finished building. The picture to some extent illustrates the urgent need for increased accommodation to carry out this most important and valuable philanthropic work, for, as will be seen, the old hospital (to the right) though possessing a large frontage has a very small depth indeed—only 12 ft. In spite of this it was stated by Mr. Allen Stoneham in his response to the toast of "The Hospital and School," that no less than 62,512 operations were carried out last year. The arrangements of the new buildings have been very carefully considered by the medical committee with an especial view to the peculiar requirements of the institution—educational as well as philanthropic—and they believe they have secured a hospital constructed for the comfort and efficient treatment of the patient and premises wherein the student should pursue his work with success because all the advantages of modern equipment and appliances will be gained. The contemplated cost of the new buildings is £30,000, towards which a considerable amount has been subscribed, the subscription list including donations from past and present students of a magnitude which can only mean a tribute to the excellent work being done and an evidence of their conviction of the real need for larger and more efficient premises wherein to carry it on. The committee are appealing for donations towards the large amount still required.

Elevation of the building as it will appear when completed.

PUBLIC VACCINATORS AND THE NEW VACCINATION ACT.

THE PUBLIC VACCINATORS OF THE WYCOMBE UNION.

A MEETING of the public vaccinators of the Wycombe Union was held at High Wycombe on Dec. 2nd. The union is one in which there has been considerable default under the Vaccination Act for the past few years and those who were present at the meeting felt that it was important that the fee under paragraph (*a*), section 1, article 3, should be sufficient to recoup them for further domiciliary visits. The following resolutions were passed:—

1. That whereas it is to be expected that many visits will have to be paid, some of them at great distances, after due notice has been given, which, either on account of the bad health of the child or on account of its insanitary surroundings or by reason of the refusal of the parents, will not result in the performance of vaccination, it is hereby resolved that the fee under paragraph (*a*), section 1, article 3 should be 2*s*. 6*d*. instead of 1*s*.
2. That whereas the performance of vaccination under the new regulations will be a much more lengthy and troublesome operation than it was formerly, and in view of the fact that the population in the rural districts is very scattered, it is hereby resolved that the following scale of fees should be allowed under paragraph (*b*): For cases within one mile of the vaccinator's residence, 5*s*.; for cases over one mile and under three of the vaccinator's residence, 6*s*. 8*d*.; for cases three miles and over of the vaccinator's residence, 10*s*.
3. That the fee under paragraph (*c*) be accepted for vaccinations performed and inspected at the vaccinator's residence, but that vaccinations performed elsewhere, such as at a station in time of an epidemic of small-pox, should be allowed an extra fee of 2*s*. per case if more than one mile away from the vaccinator's residence.
4. That whereas the public vaccinators to the workhouse and union schools live several miles away it is hereby resolved that they should be allowed 5*s*. per case.
5. That the postage on all the forms required under the order should be paid by the guardians and that all lymph shall be supplied free of cost to public vaccinators.

It was also arranged that Mr. L. W. Reynolds, Dr. J. B. McKay, and Dr. H. J. Wheeler should act as a committee to confer with the board of guardians on these matters if required, and these three gentlemen were empowered by the meeting to arrange terms.

PUBLIC VACCINATORS AT BOOTLE (CUMBERLAND).

AT a meeting of the Bootle (Cumb.) Board of Guardians held on Nov. 26th the chief business under discussion was the consideration of the arrangements for vaccination under the new Act. The vaccination medical officers—Mr. Stoney, Mr. Hudson, and Dr. Cass—were in attendance.

The Clerk stated that in Millom district 1*s*. 6*d*. per case of vaccination was allowed, while in the Ulpha district 3*s*. per case was the fee. He would also say that the board of guardians and the medical officers were unable to agree that the fees would be fixed by the Local Government Board.

Mr. Stoney pointed out that though the minimum fee, 5*s*., was a good fee for town work it was nothing like enough for work in the rural districts, where a practitioner might have to go twenty miles. Besides that, the vaccination medical officer had to send out notices and to pay the postage out of his own pocket. He considered that mileage should certainly be paid in addition. After a long discussion it was agreed on the motion of Mr. Lewthwaite that the fees in Mr. Stoney's district should be 5*s*. for the urban district, 11*s*. for Millom rural district, and 25*s*. for the Ulpha district, all per case.

Mr. Stoney having agreed to accept this as a temporary arrangement Dr. Cass was called before the board. He said that he wished to be paid at the mileage rate. It was, however, proposed that his fee should be 13*s*. 6*d*. for every successful case and with this arrangement Dr. Cass expressed himself satisfied. In Mr. Hudson's case it was agreed that his fee should be 10*s*. 6*d*. for every successful case and after some consideration Mr. Hudson agreed to this amount. We are glad to see that the proceedings, judging by the report in the *Whitehaven News*, were conducted without any of the acrimony and heat which unfortunately are only too common when vaccination matters are under discussion. A letter from Mr. Stoney dealing with the subject appeared in THE LANCET of Dec. 3rd and reference is also made to the matter in our leading columns of to-day.

PUBLIC VACCINATORS AT SCARBOROUGH.

At a meeting of the Scarborough Board of Guardians held on Dec. 1st letters were read from Mr. J. S. Vassalli (Scarborough), Mr. G. T. Wilkinson (Cloughton), Mr. O. Norris (Sherburn), Mr. J. T. Haworth (Filey), Dr. G. J. B. Hope (Hutton-Buscel), and Dr. M. Ranken Bow (Snainton). The writers declined to accept the minimum vaccination fees and asked the board to allow 2*s*. 6*d*. for each case under Article 3, section *a*, and 7*s*. 6*d*. for each case under sections *b* and *c*. The minimum fees allowed by the Vaccination Order, dated October, 1898, are 1*s*. under section *a*, 5*s*. under section *b*, and 7*s*. 6*d*. under section *c*. The matter was referred to the finance committee.

"A SCHOOL OF TROPICAL MEDICINE."

WE have not thought it necessary to print at length a memorandum which has been issued by the Seamen's Hospital Society with the idea of answering certain objections which exist to the projected School of Tropical Medicine, because the memorandum was not sent to us—for reasons best known to the committee of the society. We have seen a copy of it, however, and we give the gist of it in a leading article this week.

We publish below a letter which has been addressed to Mr. Michelli, the secretary of the Seamen's Hospital Society, by Sir William Broadbent in acknowledgment of the receipt of the memorandum:—

84, Brook-street, Grosvenor-square, W., Dec. 7th, 1898.

DEAR MR. MICHELLI,—You have done me the honour to send me a copy of the memorandum issued or to be issued by the committee of the Seamen's Hospital and I feel bound to make one or two observations upon it.

It is implied that because the first four of the contentions have been carefully considered by the Secretary of State for the Colonies they may be regarded as *choses jugées*. But the Secretary of State would be guided by the information laid before him, and if this information was imperfect or one-sided his approval was obtained under false pretences.

The personal matter of the injustice and discourtesy to the medical staff of the *Dreadnought* is said (par. 5) to have nothing whatever to do with the merits or demerits of the scheme. But this discourtesy entirely prevented certain aspects of the question from being brought to the notice of the Secretary of State and made the data on which he based his judgment imperfect and one-sided.

How little any conclusion formed by the committee is entitled to respect is made clear by the memorandum itself. "It may be mentioned," it says, "that the visiting staff of the *Dreadnought* have been invited to coöperate," leaving it to be understood that this invitation was part of the original scheme, whereas it was not sent till it had become an insult.

This *suggestio falsi* is aggravated by the circulation with the memorandum of a copy of Sir H. Burdett's letter from which the passage in which he states that the senior medical staff of the *Dreadnought* would form part of the teaching staff of the school is omitted. A committee capable of such a suppression of truth material to the issue and of such a suggestion of what is calculated to mislead is, in my opinion, totally unworthy of confidence.

Yours faithfully,

W. H. BROADBENT.

We have received from Mr. G. R. Turner, the surgeon to the *Dreadnought* Hospital, the following letters for publication. They complete the story told by the letters published last week and confirm our opinion that the honorary medical staff of the *Dreadnought* Hospital have been treated with marked discourtesy by the committee.

49, Green-street, Park-lane, W.,
July 19th, 1898.

DEAR SIR,—I have conferred with Drs. Curnow and Anderson on the subjects mentioned in Sir H Burdett's letter to the *Times* which by your direction was sent to me. I was astounded to hear from them that this letter was the first notice they had of the project for a school for tropical medicine in which their services and possibly mine were to be used as members of the teaching staff. Had I, a surgeon, been the only one of the visiting staff kept in ignorance of the matter I should not have supposed that any intentional discourtesy was meant, nor can I think even now that

it has been more than a blunder on the part of the Managing Committee to direct the publication of their intentions in the *Times* newspaper before conference of any kind with those so closely interested as the honorary visiting staff of the *Dreadnought* Seamen's Hospital. As a member of that senior staff mentioned by Sir H. Burdett I should like much to know the constitution of the sub-committee which reported that 78 per cent. of the cases of tropical disease go to the Branch Hospital; by whom was it decided what cases were tropical and what not; and whether this report may be inspected and shown to be accurate and true (a very necessary proceeding before asking the public to subscribe to the erection of buildings and the attempted formation of a school in a very out-of-the-way and inaccessible situation); by whom were the already elaborate plans for this proposed school drawn up; and did their author or authors know that the visiting staff of the *Dreadnought* Hospital were in absolute ignorance that such a scheme was on foot?

I have written thus freely because as a surgeon these matters do not nearly concern me, and I cannot help feeling that my medical colleagues have been treated with a marked lack of the ordinary consideration to which all of us honorary officers are entitled, and I trust that the Managing Committee will be able to give us some explanation.

Believe me, yours faithfully,
(Signed) G. R. TURNER.

To the Chairman of the Committee,
Seamen's Hospital, Greenwich.

3, Crosby-square, Bishopsgate, E.C.,
July 20th, 1898.

SEAMEN'S HOSPITAL.

DEAR SIR,—I write a line to acknowledge the receipt of your letter of July 19th, 1898.

I am sorry to learn that the senior medical staff of the *Dreadnought* Hospital take exception to portions of Sir Henry Burdett's letter relating to the proposed establishment at the Branch Hospital of a school for the study of tropical diseases which was published in the *Times* of July 11th.

The questions asked by your letter are rather for the Committee of Management than for me personally as chairman to reply to. I will take care that your letter is brought before the committee at their next meeting.

I am, dear Sirs, yours faithfully,
(Signed) PERCEVAL A. NAIRNE.

G. R. Turner, Esq., F.R.C.S., 49, Green-street, Park-lane, W.

49, Green-street, Park-lane, W.,
July 21st, 1898.

DEAR SIR,—Thank you for your letter of July 20th. The senior medical staff of the *Dreadnought* Hospital—I believe I may speak for us all—take exception to the elaboration and publication of a scheme for a school in which it is stated they will teach before any of them had heard a word on the matter. It is not, I think you will agree with me, customary or considerate to make statements about the coöperation of honorary officers in work the existence of which they know nothing about. This Sir H. Burdett has done by the direction of the Managing Committee and it is against this that I most vigorously protest. It is not, I will only say, usual for managing committees to ignore the honorary staff as we have been ignored. It looks, although I can hardly believe it, that we have been purposely kept in the dark.—Believe me, yours faithfully,
(Signed) G. R. TURNER.

Perceval A. Nairne, Esq.

Dreadnought Seamen's Hospital, Greenwich, S.E.,
Sept. 15th, 1898.

DEAR SIR,—Your letters to the chairman of July 19th and 21st have been laid before my Board.

The committee feel that their relations with the medical staff in the past are a sufficient answer to the suggestion that any discourtesy or want of consideration towards them in connexion with the society's reply to the Secretary of State's proposal for the establishment by the society of a school for the study of tropical diseases was intended.

The committee regret that any expression in Sir Henry Burdett's letter published in the *Times* of July 11th should appear to you and to some of your colleagues to have represented that you and they had engaged to take part in the educational work of the school. Sir Henry Burdett (with the committee) probably felt no doubt that the educational work would in the main be taken charge of by the medical staff of the society's hospitals, but the committee do not read his letter as a pledge that each member of the staff would join in the educational work.

The committee have read with much regret the joint letter of Dr. Curnow, Dr. Anderson and yourself, published in the *Times* of July 20th, and in some of the medical papers a few days later, which they feel must tend to injure the success of the project into which the committee have entered at the invitation of the Secretary of State. They will be glad to know whether they are to infer from it that the writers have renounced all connexion with the proposed school and upon this point they ask for a definite reply at an early date. Yours faithfullly,

P. MICHELLI, Secretary.

G. Robertson Turner, Esq., F.R.C.S.,
49, Green-street, Park-lane, W.

A FIFTH REPORT TO THE REGISTERED PRACTITIONERS OF ENGLAND AND WALES.

SINCE my last report to the Registered Practitioner of England and Wales published in the medical journals of May 14th of this year another session of the Council has taken place. I am therefore in a position to report definitely concerning certain matters which were at issue on the date mentioned. These matters are as follows:—

I. The inspection of documents.
II. The case of the late Mr. Herbert K. Hunter, L.S.A.
III. The Midwives Bill question.
IV. The medical aid question.
V. The question of reciprocity in foreign practice.
VI. The amendment of the Medical Acts and the relation thereto of the Council's work in regard to unqualified practice by (*a*) individuals—i.e., quacks, and by (*b*) companies.
VII. The responsibility of the Council for the character of the higher registrable qualifications.

I. *The inspection of documents.*—It will be remembered that immediately upon his election on April 7th, 1898, the President gave orders that I should not be allowed to see any documents the property of the Council, although up to the date named I had enjoyed the customary rights of a member of the Council. Unfortunately for the furtherance of business this act of the President was supported by a motion carried in the Council at the May Session, 1898, by Dr. Glover and Dr. Bruce and the matter was further complicated by the Council accepting on the proposal of Dr. MacAlister Dr. Glover's motion as a Standing Order. With the view of restoring the rights of members of the Council and thereby defending your interests I took the advice of Mr. Hempson and the opinion of Mr. Henry Buckley, Q.C., on the matter. Mr. Buckley's opinion briefly stated amounted to the following propositions:—That the case of the King *v.* the Merchant Taylors' Company which had been cited to the Council did not apply, as indeed I had already shown, to the case of members of the Council and also, as Mr. Hempson had advised me, was directly negatived by the case of Byrne *v.* the South Wales Coal Company; that under these circumstances my position was clearly defined and good and supported by the dicta of the judges in the first case mentioned; that, however, the case was wholly prejudiced by the action of the Council in making Dr. Glover's motion into a Standing Order; that it was legally possible for the Council by such Order to hamper its work and the opportunities of its members in any way provided that no member could show damage or serious obstruction to his work to result from such hindrance; that it would be advisable to move at the next session for the production of documents and that if these were refused I could then apply to the High Courts for a remedy. I therefore moved at the recent session several motions for the production of various sets of papers. Although opposed as strongly as possible by Dr. MacAlister, the chairman of the Business Committee, and the President, the Council supported me by majorities amounting to over three-fourths of the Council. The discussions which preceded these votes created such an unfavourable impression that several members of the Council

insisted that since every member had a prescriptive right to see the documents no delay should occur in the latter being produced for their inspection. More than this, later in the session a motion was proposed by Sir Richard Thorne and carried to the effect that, inasmuch as the operation of Dr. MacAlister's Standing Order of the previous session was "not altogether satisfactory" the Executive Committee were directed to report as to the best means of facilitating the examination of documents by members of the Council. This resolution of Sir Richard Thorne was carried *nem. con.*, and although such a vote was a very striking commentary on the events of the previous session the resolution contained one error of procedure which will require to be removed later—namely, that leave must be asked of someone or of the Council before documents can be produced by the Registrar. This, of course, conveys with it the assumption that some members of the Council have an authority over other members of the Council, but such a position is contradictory to the Medical Acts under which all the members of the Council have equal rights and no statutory authority can be delegated to any official whatsoever. The profession must clearly understand that it is not possible for the Direct Representatives to carry out their work properly until these illegal restrictions are fully removed, but at least it is very satisfactory to note that the proceedings of this last session have to a large extent neutralised the injury inflicted six months ago.

II. *The case of the late Mr. H. K. Hunter, L.S.A.*—The case of this gentleman who unfortunately died after his conviction for calling himself a physician is one of vital importance. It was one (in which a registered practitioner was prosecuted by the Council under Section 40 of the Medical Act for calling himself a physician) which excited much attention at the time—i.e., April, 1898—and I was especially attacked in the medical journals as having sanctioned this particular prosecution and as being, in fact, responsible for it as a member of the Council though a Direct Representative of the profession. The only constitutional course open to me was to raise the matter in the recent session of the Council, but discussion of it being refused me by a narrow majority I have no option now but to clear myself before the profession and show that not only was I not responsible but that also the Council itself was not responsible and that the prosecution in question was wholly unauthorised and conducted upon lines which have never been the subject of discussion in the Council at all. Mr. Hunter was an L.S.A. and a registered medical practitioner. He was complained of to the Council for using the title of M.D., he only possessing the M.D. of Philadelphia. On being warned that he was doing an illegal act he thereupon ceased to use the M.D. However, the Penal Cases Committee reported his case to the Council as one suitable for prosecution under Section 40 of the Medical Act and his conduct was described to the Council as that of an unregistered person practising under an American M.D. degree. The Council on this information ordered that a summons should be issued under Section 40 of the Medical Act to restrain, as they believed, an unregistered person from practising under the cover of an American diploma. This decision was come to at the November session, 1897. The profession will now readily understand with what feelings I read in the *Times* in April, 1898, the account of the hearing of the summons from which it appeared that Mr. Hunter was a *registered* practitioner holding an L.S.A. diploma and that he was prosecuted not for calling himself an M.D. but for putting upon his bill-heads the word "physician," that he was convicted and fined £5, and that he had lodged an appeal against the conviction. This was the first stage of this matter and it will be seen that Mr. Hunter was prosecuted on a charge which had never been discussed by the Council and had never been authorised by the Council. At the May session, 1898, soon after these proceedings were made public, Mr. Brown and myself raised the question to draw attention to the procedure of the Penal Cases Committee and of the law officers and to inquire by whose authority this prosecution had been initiated. The President appealed to Mr. Brown to withdraw his motion on the ground that the case was still *sub judice*. Unfortunately, Mr. Brown assented, though on the understanding that the matter would be brought forward at the next, the recently completed session. Not long after the May session Mr. Hunter died and the Apothecaries' Society determined to prosecute the appeal in his stead. It being impossible under the recent Standing Order of the Council forbidding inspection of documents to find out what steps were being taken in this matter in the name of the Council until the session began on Nov. 22nd, Mr. Brown and I on that date moved for the documents in the case to be produced and, as just stated, we carried that motion in the face of a strenuous opposition offered by the President, the chairman of the Penal Cases Committee, by Dr. MacAlister, by Dr. Heron Watson, and by Mr. Carter. Gathering from the perusal of the surrendered papers that the appeal was being resisted by someone using the authority of the Council I asked the Registrar who were the parties in the appeal case, but neither he nor the President nor the Penal Cases Committee nor any of the Members of the Council were in the possession of any such information. On my pressing the matter the President agreed to write and find out what was the position of the Council in the appeal case immediately pending. The legal assessor informed the President that the General Medical Council was resisting the appeal on the ground (as he had already told the High Court) that Mr. Hunter had no right to call himself a physician. It follows therefore that not only the original prosecution but also the resistance to the appeal have been instituted without the Council being afforded the slightest opportunity of discussing the merits of the case or authorising action upon it. This is the first issue in the Hunter case—namely, the utterly unconstitutional nature of the procedure—and this issue I endeavoured to raise on three separate occasions during the last session but was ultimately defeated though by a bare majority. The other issue which should be called the main issue—namely, whether Mr. Hunter as an L.S.A. registered under the Act of 1886 had the right to call himself a physician—is one about which I have no doubt whatever and which it is easy to show is not governed (as was alleged before the magistrates) by the case of Regina *versus* Baker. This question of the merits of the case I will discuss on a subsequent occasion.

III. *The Midwives Bill question.*—The matter of legislation for midwives came up before the recent session of the Council and a small committee was reappointed to watch the introduction of any further legislation as it seemed likely that such action might be taken by the Government. Further, a few additions were carried in the Council to the former principles which were laid down by the Council in the May session of the present year and which principles it will be remembered were fully adopted by the Duke of Devonshire, the Lord President of the Privy Council.

IV. *The medical aid question.*—As will be seen by the published reports of the Council's session the committee which has this matter in charge has only published an interim report because it has been arranged to hold a conference with the officials of the reputable friendly societies in order to satisfy themselves of the precise position of such associations in relation to the medical profession. Such conference cannot take place before early in 1899 and consequently the committee in question can only publish their full report at the next, the May, session of the Council. Greatly regretting as I do the delay in the Council taking up a definite attitude on this important matter there is no possibility of altering the procedure that has been entered upon.

V. *The question of reciprocity and foreign practice.*—In the May session I brought up this matter and showed that the document issued by the Council as an authoritative one on the question of reciprocity in foreign practice was not in accordance with the Medical Acts. After some discussion it was referred back to the Executive Committee for amendment and report. When, however, in the recent session their report was approached on the programme the President suggested that it was a matter which did not press and could be postponed for six months, with which of course I agreed and especially as in its amended form the document is still in my opinion misleading.

VI. *Amendment of the Medical Acts.*—The relation of the work of the Council in regard to unqualified practice received considerable attention this session and very distinct advance was made in more than one direction. The prevention of unqualified practice is necessarily to be considered under two headings, according as to whether (*a*) it is carried on by an individual or (*b*) by a company. As regards the individual the singularly gross case of misprision of justice in the magistrates' treatment of the case prosecuted at Norwich by the Medical Defence Union came before the Council which, however, unfortunately could not intervene inasmuch as the magistrates stated that they arrived at their decision on the point of fact and not of law. Upon this I drew the attention of the Council to the necessity of

meeting such constructive evasion of the law by an amendment of the Medical Act and obtained from Mr. Muir Mackenzie a reconsideration of his former adverse opinion on this subject. The question of the infringement of the Medical Acts by companies is another point and is being dealt with by a special committee consisting of the President, Mr. Tomes, and myself. Proposals which were subsequently approved by the Council have been furnished to the Government whereby it is to be hoped that the companies constructed for the sole purpose of evading the clauses of the Medical Act will be extinguished.

VII. *The responsibility of the Council for the higher qualifications.*—In connexion with the matter of higher qualifications I gave notice at the recent session that I would draw attention to the fact that a memorial had been presented to the Council by certain members of a medical corporation complaining in specific terms of reprehensible insufficiency of the examination for the Fellowship of the corporation. As a matter of fact this memorial which had been addressed to the Council had never reached the Council because it was returned by the President to the complainants on the ground that the Council had nothing to do with any superintendence of, or was in any way responsible for, the status of examinations for higher qualifications. The matter being placed in my hands by the persons aggrieved in order that it should come before the Council I gave notice of the motion alluded to, but when it came on for discussion the President ruled it out of order on the same ground as that upon which he had returned the memorial—namely, that the question involved was not within the purview of the Council. There are two points included in this matter: the first is the act of the President in taking upon himself to reject a memorial addressed not to him but to the Council. The President has, I submit, no right to debar memorialists from approaching the Council, and, in fact, there is no restriction on memorials except that they must not relate to more than one subject. I did not bring up before the Council the question of the President's action because, it being the end of the session, I was anxious to obtain a hearing for the very important question raised by the memorial—namely, an alleged insufficiency of the examination which was that for the Fellowship of the Faculty of Physicians and Surgeons of Glasgow. In this, however, I was disappointed, because the President ruled the motion out of order and the whole matter was thus once more suppressed so far as the General Medical Council was concerned. This ruling of the President was evidently given without reference to the sections of the Medical Act of 1858 which deal with this subject and specifically with the examination for the Fellowship of the Faculty of Physicians and Surgeons of Glasgow. I therefore at once gave notice that I would raise the question at the next session—namely, in May, 1899.

VICTOR HORSLEY.

Dec. 5th, 1898.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6638 births and 4108 deaths were registered during the week ending Dec. 3rd. The annual rate of mortality in these towns, which had been 17·0 and 17·4 per 1000 in the two preceding weeks, further rose last week to 19·1. In London the rate was 18·2 per 1000, while it averaged 19·7 in the thirty-two provincial towns. The lowest rates in these towns were 12·4 in Burnley, 13·5 in Halifax, 15·3 in Cardiff, and 15·9 in Sunderland; the highest rates were 23·4 in Derby, 24·2 in Salford, 24·8 in Newcastle-upon-Tyne, and 27·8 in Wolverhampton. The 4108 deaths included 426 which were referred to the principal zymotic diseases, against 371 and 364 in the two preceding weeks; of these 108 resulted from diphtheria, 87 from measles, 71 from "fever" (principally enteric), 71 from whooping-cough, 49 from diarrhœa, and 40 from scarlet fever. The lowest death-rates from these diseases were recorded in Plymouth, Burnley, Halifax, and Gateshead, and the highest rates in Preston, Blackburn, Salford, and Swansea. The greatest mortality from measles occurred in West Ham, Portsmouth, Swansea, Bolton, and Newcastle-upon-Tyne; from whooping-cough in Swansea and Preston; and from "fever" in Wolverhampton, Blackburn, and Sheffield. The mortality from scarlet fever showed no marked excess in any of the large towns. The 108 deaths from diphtheria included 43 in London, 15 in Leeds, 9 in Swansea, 7 in West Ham, 4 in Blackburn, and 4 in Sheffield. No fatal case of small-pox was registered during the week under notice, either in London or in any other of the thirty-three large towns; and no small-pox patients were under treatment in any of the Metropolitan Asylums Hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital at the end of last week was 3142, against 3188, 3259, and 3162 on the three preceding Saturdays; 264 new cases were admitted during the week, against 340, 319, and 234 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 285 and 280 in the two preceding weeks, rose again last week to 340, but were 71 below the corrected average. The causes of 62, or 1·5 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Croydon, Oldham, Sunderland, and in nine other smaller towns; the largest proportions of uncertified deaths were registered in Cardiff, Birmingham, Liverpool, and Preston.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had increased in the four preceding weeks from 18·9 to 19·7 per 1000, further rose to 21·0 during the week ending Dec. 3rd, and exceeded by 1·9 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 15·3 in Greenock, and 18·7 in Perth, to 21·5 in Edinburgh and 22·0 in Glasgow. The 632 deaths in these towns included 21 which were referred to whooping-cough, 19 to measles, 17 to diarrhœa, 11 to diphtheria, 10 to "fever," and 5 to scarlet fever. In all, 83 deaths resulted from these principal zymotic diseases, against 70 and 73 in the two preceding weeks. These 83 deaths were equal to an annual rate of 2·8 per 1000, which was 0·8 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had been 9 and 19 in the two preceding weeks, further rose to 21 last week, of which 15 occurred in Glasgow. The 19 deaths from measles also showed a further increase upon recent weekly numbers, and included 9 in Edinburgh, 6 in Glasgow, and 3 in Dundee. The fatal cases of diphtheria, which had been 11 and 5 in the two preceding weeks, rose again to 11 last week, of which 7 occurred in Glasgow and 2 in Paisley. The 10 deaths referred to different forms of "fever" were within one of the number recorded in the preceding week, and included 6 in Glasgow and 2 in Edinburgh. The deaths from diseases of the respiratory organs in these towns, which had been 130 and 128 in the two preceding weeks, rose again to 147 last week, and were 22 above the number in the corresponding period of last year. The causes of 51, or more than 8 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 27·7 and 31·0 per 1000 in the two preceding weeks, further rose to 31·6 during the week ending Dec. 3rd. During the past four weeks the death-rate in the city has averaged 30·1 per 1000, the rate during the same period being 17·0 in London and 20·6 in Edinburgh. The 212 deaths registered in Dublin during the week under notice showed an increase of 4 upon the number in the preceding week, and included 11 which resulted from the principal zymotic diseases, against 9 and 17 in the two preceding weeks; of these, 4 were referred to scarlet fever, 3 to whooping-cough, 2 to "fever," 1 to measles, 1 to diphtheria, and not one either to small-pox or diarrhœa. These 11 deaths were equal to an annual rate of 1·6 per 1000, the zymotic death-rate during the same period being 1·7 in London and 2·5 in Edinburgh. The 4 fatal cases of scarlet fever corresponded with the number recorded in the preceding week. The deaths from whooping-cough, which had been 2 and 5 in the two preceding weeks, declined to 3 last week. The 2 deaths referred to "fever" corresponded with the number in the preceding week. The 212 deaths in Dublin last week included 34 of infants under one year of age and 46 of persons aged upwards of sixty years; the deaths of infants showed an increase, while those of elderly persons were considerably below the number recorded in the preceding week. Six

inquest cases and 2 deaths from violence were registered; and 78, or more than a third, of the deaths occurred in public institutions. The causes of 12, or nearly 6 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE under-mentioned Staff Surgeons have been promoted to the rank of Fleet Surgeon in Her Majesty's Fleet:—Alexander John James Johnston and James O'Brien Williams.

ARMY MEDICAL STAFF.

Surgeon-General Albert A. Gore is placed on retired pay.

ROYAL ARMY MEDICAL CORPS.

Colonel Fraser succeeds Colonel Scott as Principal Medical Officer, North-Western District, Chester. The employment of Major Brazier-Creagh with the Pekin Syndicate has been sanctioned. Lieutenant-Colonel Lloyd, V.C., has been appointed to the Medical Charge of the Burma-China Boundary Commission. Major Cusack is under orders to proceed to India. Major Russell and Major Stoney embark in the *Dunera* for Bombay.

VOLUNTEER CORPS.

Artillery: 1st Dorsetshire (Southern Division, Royal Artillery: Surgeon-Captain D. T. Key, from the 1st City of London Volunteer Artillery (Eastern Division, Royal Artillery), to be Surgeon-Captain. 1st Glamorganshire: Surgeon-Lieutenant-Colonel C. Pegge resigns his commission; also is permitted to retain his rank and to continue to wear the uniform of the corps on his retirement. *Rifle:* 8th Volunteer Battalion the Royal Scots (Lothian Regiment): Surgeon-Captain R. Kirk to be Surgeon-Major. 2nd Volunteer Battalion the Northumberland Fusiliers: Surgeon-Lieutenant-Colonel H. F. Hurst resigns his commission; also is permitted to retain his rank and to continue to wear the uniform of the battalion on his retirement. 3rd (Dumfries) Volunteer Battalion the King's Own Scottish Borderers: Honorary Assistant Surgeon W. Kay resigns his commission and is permitted to continue to wear the uniform of the battalion on his retirement. 3rd Lanarkshire: Andrew Stewart Tindal to be Surgeon-Lieutenant. 1st (Oxford University) Volunteer Battalion the Oxfordshire Light Infantry: Walter Tyrrell Brooks to be Surgeon-Lieutenant. 1st Nottinghamshire (Robin Hood): Surgeon-Lieutenant Robert Plenderleith Shearer resigns his commission and is appointed Second Lieutenant (Supernumerary). 1st Wiltshire: Penrose John Barcroft to be Surgeon-Lieutenant. 3rd (The Blythswood) Volunteer Battalion the Highland Light Infantry: Surgeon-Captain J. S. McConville resigns his commission. 2nd Volunteer Battalion the Gordon Highlanders: Surgeon-Major Sir J. Reid, Bart., K.C.B., resigns his commission and is granted the rank of Surgeon-Lieutenant-Colonel, with permission to continue to wear the uniform of the battalion on his retirement. 26th Middlesex (Cyclist): Percy James Edmunds to be Surgeon-Lieutenant.

VOLUNTEER MEDICAL STAFF CORPS.

The Aberdeen Company: Ashley Watson Mackintosh to be Surgeon-Lieutenant. The Woolwich Company: Surgeon-Captain P. O. Haynes resigns his commission.

THE HYGIENE OF BARRACK-ROOMS.

In his third and concluding Harben Lecture Sir Richard Thorne was able to say that administrative measures in this country have led to a saving of no less than 60 lives out of every 100 which at many age periods were formerly sacrificed to phthisis pulmonalis. This is truly the record of a magnificent achievement—a triumph of science over disease of which sanitarians may well be proud; but at the same time, although much has been accomplished, there still remains much to be done before the workers in this particular field can fold their hands and declare themselves satisfied with their labours. In the army, for instance, the victims of preventable disease are still unduly numerous. *A priori* it might be thought that a body of sound young men—picked lives, well fed, well lodged, well clothed, and by no means excessively worked—should be practically free from tuberculous disorders, but, unfortunately, such is far from being the case. It is, happily, true that of late years the mortality from phthisis pulmonalis and the other allied affections which, taken together, are included under the term "tuberculosis," has enormously diminished, but it is still too high, while the loss by invaliding under the same heading is also lamentably great. The causes which favour the onset of tuberculosis among soldiers may be complex, but enough is now known of the intimate nature of the infecting agent to warrant the belief that its virulence could be diminished by intelligently-applied prophylactic measures. Whatever may be the case as regards the civil population in general, the stamping out of tuberculosis in the army should be perfectly feasible, and surely the consummation is highly to be desired, were it merely for financial reasons. In France, where destructive lung disease is at least as deadly as it is with us, the whole subject of tuberculosis has recently been surveyed in a masterly manner by Professor Grancher, whose report embodies the views of the most advanced hygienists in the country. The condition of things prevalent in the French army is eloquently described. We do not go so far as to apply the Horatian maxim *mutato nomine de te fabula narratur*, but the following extract from M. Grancher's academic work is well worth the notice of our own army authorities, military as well as medical.

> Whatever may be the part played by infection in the dissemination of tuberculosis among soldiers, the fact remains that the disease exists and, what is more, that it exists to a considerable extent. This being universally admitted it is unnecessary to advance further proof. But what is there done by way of combating the evil? In a barrack-room the first half-hour after reveille is devoted to dressing, to perfunctory bed-making, to floor sweeping, and to breakfast. These operations go on simultaneously, so the men have to swallow their coffee and rolls in a dust-laden atmosphere. Spittoons are scarce or entirely deficient, and coughers, if there are any, spit where they choose. The medical officer does not, and cannot, interfere; the internal economy of the room, hygiene included, belongs to the commanding officer—that is, to the captain commanding the troop or company. But is the latter aware of the fact that bacilli-laden dust is dangerous? Or, if he should be aware of it, does he take the necessary steps? No, it must be admitted that he does nothing; and here it is that we find the weak link in the chain. The barrack-room is choked with dust, the dust contains the broken-up sputa; hence arises the infection. Of course all spitting outside spittoons should be sternly forbidden under pain of severe punishment. Spittoons should always be kept moist and should also be fixed breast-high. Their cleansing and thorough disinfection should be a daily task. Finally, sweeping of floors is a fault; floors should be treated with coal-tar or paraffin and cleansed by means of a damp cloth. Now, according to existing regulations the medical officer can do nothing, has no right to exercise supervision. The combatant officer alone—be he captain, colonel, or commandant—can see to the execution of sanitary hygiene. It is therefore necessary that combatant officers should be taught to appreciate the dangers to which their negligence exposes the health of the men for whose well-being they are responsible. The lessons in practical hygiene which are given at Saint-Cyr, at Saint-Maixent, and at Fontainebleau ought to be more complete and probably more accurate. But lessons of this description could alone never suffice, and I hereby appeal to all army medical officers to take advantage of their intimate associations with their combatant brethren, so that all officers and men alike may become imbued with the same sanitary convictions by which they themselves are animated. In propagating true sanitary notions far more good is likely to accrue from judicious hints dropped at the mess than from the most elaborate of official reports. The only way to ensure progress in hygiene is by awakening the consciences of those in authority to a recognition of the fact that they it is who are responsible for the health of their men. Thus alone is it possible to create new manners and customs amidst the combatant hierarchy—manners and customs which will be dominated by a wholesome dread of tuberculosis and of its active principle.

A FRENCH MILITARY SURGEON'S VIEW OF THE SEQUELÆ OF INFLUENZA.

Surgeon-Major J. Marty's short paper on the Cerebro-spinal Complications of Influenza which occupies the leading position in Duplay's *Archives Générales de Médecine* for November is chiefly remarkable for its wealth of reference, but although upwards of 50 authorities—French, German, and Swiss—are cited there is no mention made of the works of British or American writers. The greater part of the paper is occupied by the cases of 8 soldiers, which are related at length with a considerable amount of detail; 6 of these cases ended fatally, but in 2 only were necropsies permitted. Surgeon-Major Marty's chief contention seems to be that the occurrence of cerebro-spinal symptoms after influenza depends upon the intensity of the original "intoxication." His experience extends over three separate epidemics. In the first, the intoxication being mild, there were no cerebro-spinal sequelæ. In the second, the intoxication being graver, certain symptoms of "pseudo-meningitis" presented themselves subsequently. In the third the intoxication carried all before it and the ensuing "meningeal accidents" were invariably fatal. It may be interesting to note that the average stature of the men treated was 5 ft. 3 in. and their chest measurement 33·4 in. They all belonged to a line regiment.

THE PRINCIPAL MEDICAL OFFICER OF HER MAJESTY'S FORCES IN INDIA.

It has been alleged that an attempt has been made to induce the home authorities to sanction an arrangement by which Surgeon-General Harvey would combine the duties of direction of the Indian Medical Service with those of Principal Medical Officer of Her Majesty's forces in India. As we have already announced, however, the successor to Surgeon-General Gore, who vacates his appointment this month, will be Surgeon-General Taylor, C.B., and we do not believe that any rumours to the contrary have any foundation in fact.

THE VICTORIA CROSS.

The Queen has been graciously pleased to signify her intention to confer the decoration of the Victoria Cross on Surgeon William Job Maillard, M.D. Lond., Royal Navy, whose claims have been submitted for Her Majesty's approval, for his conspicuous bravery during the outbreak at Candia on Sept. 6th, 1898. We refer in another column to the splendid circumstances in which Surgeon Maillard's cross was won.

COLONEL F. B. SCOTT, R.A.M.C.

Colonel F. B. Scott, C.M.G., who has been placed on the retired list and has consequently vacated his appointment at Chester, joined the Army in October, 1862, and reached his present rank in 1892. He served in the Zulu war, 1879, when he was mentioned in despatches, and in the Egyptian campaign of 1882.

DEATHS IN THE SERVICES.

Lieutenant-Colonel Thomas Mayne, I.M.S., at Melbourne, in his fiftieth year. He entered the Indian Army in 1872 and was subsequently in charge of the medical department of the 24th Madras Infantry. He died while he was on his way home for the benefit of his health, being landed at Melbourne.

Correspondence.

"Audi alteram partem."

INSTRUCTION IN TROPICAL MEDICINE.

To the Editors of THE LANCET.

SIRS,—In referring to the subject of a proposed School of Tropical Medicine in your issue of Nov. 26th you remark that laboratories already exist on the Victoria Embankment at Chelsea and at certain metropolitan schools. A "Colonial Physician," writing in the *Daily Chronicle* (Nov. 29th), supports the suggestion of a new laboratory by stating that the existing institutions exist for "a variety of quite different uses." I should esteem it a great favour if you would allow me to state the case on behalf of the bacteriological department of King's College, London. I wish also to make some suggestions which I venture to think may possibly have the effect of promoting the object which Mr. Chamberlain has in view.

As regards the laboratories at King's College let me say most emphatically that they differ very materially from those attached to some of our metropolitan medical schools. Twelve years ago these laboratories were founded and equipped for *teaching and research*. They were opened to all comers and special facilities were granted to colonial and foreign practitioners both for obtaining instruction and for carrying on original research. More than 1000 qualified medical practitioners, many of them holding high positions in the colonial, naval, Indian, and army medical services, have entered for instruction in the laboratory. The list of registered names includes those of practitioners and medical officers from Egypt, West Coast of Africa, Uganda, the Cape, British Guiana, Jamaica, Trinidad, Straits Settlements, India, Ceylon, China, Japan, Queensland, New South Wales, Canada, New York State, Michigan, Ohio, Missouri, Indiana, California, Florida, Chili, and Buenos Ayres. Several workers in the laboratory have been specially trained with a view to combating plague, cholera, yellow fever, madura disease, actinomycosis, cattle plague, pleuro-pneumonia, and other diseases prevalent in our colonies and in foreign countries. The Colonial and War Offices have recognised the laboratories by granting leave of absence in order that their officers might be trained in King's College.

The course of instruction consists of (1) lectures and practical instruction in all that relates to the knowledge which we at present possess of the causation and prevention of diseases of man and animals attributed to bacteria and other micro-parasites; (2) Advanced technical instruction in the methods of original research, thereby encouraging further researches in the colonies by competent observers. A thorough knowledge of these diseases cannot be imparted in a small clinical laboratory attached for convenience to the wards of a hospital. In the first place, there would be no opportunity for learning anything about the epidemic diseases of animals. It will at once be admitted that the services of colonial health officers and colonial practitioners would be of increased value if they were qualified (especially in the absence of any veterinary surgeon, or by coöperation with them) to advise upon the best means of stamping out tuberculosis, actinomycosis, cattle plague, pleuro-pneumonia, surra, Loodiana disease, &c., and also if they were competent to undertake original researches in connexion with diseases of animals, especially those communicable to man. In the second place, I would point out that cases of leprosy, yellow fever, cholera, plague, madura disease, and many other tropical diseases are very rarely imported to England, and therefore instruction at the bedside, supplemented by examination in a clinical laboratory would be very irregular and inadequate. For training students in these diseases reliance must be mainly placed upon the pathological and bacteriological investigation of morbid specimens and materials supplied from the colonies and the study of cultivations. To collect such material requires time, and to constantly carry on cultivations necessitates a large, well-equipped laboratory and a well-trained staff. The teachers should be ready at all times to give instruction and, indeed, willing to practically devote the whole of their time to teaching and research. Such a laboratory can only be provided and maintained at very great cost, and the establishment of a new laboratory on this scale would only provide for work for which provision has already been made at King's College and the Institute of Preventive Medicine. It would not supply any want, but it would enter into competition more especially with the teaching at King's College and thus undermine the work which has been carried on for twelve years. The effects of this would be severely felt.

Mr. Chamberlain's object being the advancement of the education of colonial practitioners and the control of tropical diseases, let me point out how such an admirable object can be made to receive, as it should receive, the support of all. I would venture to make suggestions which are based upon a long experience of the needs of colonial practitioners. These suggestions I will embody in the form of regulations for admission to the colonial service.

All candidates for colonial medical appointments should be required to attend and be "signed up" for the following: 1. A special course of clinical instruction in tropical medicine. This course might be given at the Seamen's Hospital and in coöperation with the metropolitan hospitals. An arrangement might be made with the metropolitan hospitals by which candidates for the colonial service were granted a circular ticket giving them the privilege of being shown in the wards any cases of interests to colonial practitioners. 2. A course of lectures on tropical medicine and hygiene, delivered at the proposed School of Tropical Medicine and the Seamen's Hospital or any other medical school recognised by the Colonial Office as providing adequate training in this subject. 3. Lectures and practical instruction for not less than six weeks in a bacteriological laboratory or institute which is recognised by the Colonial Office as fully equipped with the materials and teaching staff necessary for giving the instruction required.

I would like to add another suggestion. Those already holding appointments in the colonial service and those engaged in private practice in the colonies would derive very great benefit if they were to take advantage of these lectures and practical studies and thus keep themselves in touch with the most recent views and with current research. Encouragement might be given to those on leave from the colonies by the creation of colonial scholarships or studentships entitling the holders to free attendance on the same course of instruction demanded from candidates for the colonial service.

I am, Sirs, yours faithfully,

EDGAR M. CROOKSHANK, M.B. Lond

King's College, London, Dec. 5th, 1898.

"THE 'OPEN-AIR' TREATMENT OF TUBERCULOSIS."

To the Editors of THE LANCET.

SIRS,—As one who has for over forty years preached and practised the gospel of pure air and plenty of it night and day, summer and winter, for the treatment and prevention of respiratory maladies, especially pulmonary tuberculosis, I have felt great interest in the movement of professional opinion in this direction so marked of late and am tempted to ask you to grant me a little of your space to comment thereon.

It was about the middle of the fifties, at a time when the dismal doctrine of inheritance held sway in this country and infection was not accepted, that I first saw light and soon after found salvation by placing my faith on the *vis medicatrix naturæ* as exemplified in the uniformly successful result of the common treatment of a simple fracture. Many considerations led me to this attitude of mind, but among the chief of them was the occurrence of cases of recovery after practitioners had despaired and when patients had become reckless, such as the well-known duck-shooter mentioned by Stokes. Although for many years I recommended not only the various drugs but also many of the climates, the altitudes, and the latitudes which from time to time were advocated by persons who apparently had enjoyed some special experience, yet in the end it came about that I had to lose faith in drugs of all sorts and to conclude that as to climate, when taken into account together with other conditions of life, the people of these islands are as well off as those of any other land, and that only for those few who enjoyed travel and could afford to indulge themselves freely was there an advantage to be gained by so moving about as to secure in all parts of the year the best season. For the vast majority such life of the swallow is out of the question, and I will say no more on that subject. The principle upon which I had to rely, then, being to secure for the sick all the conditions which make for health in the healthy, and to protect against all the adverse ones, as a splint protects by securing rest, rich and varied foods within the limits of appetite and digestion were enjoined, and as much functional exercise as could be borne, as well as pure air in abundance, which, however essential, is not the whole matter.

The "open-air treatment," as it is called, I therefore hail with pleasure and am glad to note that it must when rightly apprehended finish off the remaining bogies about "draughts and chills." There are two lessons, as it seems to me, which may be learned from the perusal of the recent papers on this subject which are of equal or even greater importance than the establishment of sanatoria, valuable as I admit they may be for a certain proportion of cases and for certain classes.

The first of these to which I would call attention is the adoption of the best known modes of life as approved by the experience of special sanatoria by a person of moderate means in his own home. The number of persons who might adopt such a mode of life is, I think, much larger than of those who could or would go to a sanatorium in this country or abroad. I have noticed of late years a marked change in the mental attitude of patients affected with this malady. Whereas in the days when the doctrine of heredity held sway it was difficult to induce a patient to face the facts and almost as difficult for the medical man to be frank, now a very large proportion of them will bear being told the truth and like it. These may, if carefully instructed and moderately supervised, be trusted to carry out at home practicable measures for their "open-air treatment," and this on a balance of considerations with at least as much hope of recovery as at any sanatorium here or abroad.

The other lesson is that the measures upon which practically everyone now relies for the cure of the malady are just those which maintain health in the healthy—are, in fact, all contained in the word "sanitation," if we include in it genuine cleanliness of person, domicile, air, water, and foods.

The remarkable fall in the death-rate from all tuberculous diseases, but more especially from the pulmonary form which has taken place during the last thirty years, although I grant it has not received a full explanation, can scarcely have been uninfluenced by the widespread improvement in the sanitation of this country which the same period has witnessed. Without desiring to undervalue the effects in this direction which may have been due to measures which have diminished the number or virulence of infective microbes or the occasions for their gaining admission into the body, which measures must have had some share in the results attained, I am strongly of opinion that the generally improved vigour of the people which has resulted from the better and cleaner and more airy houses, with better food and more of it, has had a larger share in bringing about this result. Be that as it may, no one can doubt that our efforts in the future should be directed to the attainment of both objects—that is to say, to diminishing the number and virulence of the bacilli and the occasions for their infecting us as well as to the increase of the resisting powers of the people and, as it were, to the establishment of a more widespread immunity against the tubercle bacillus. That most people are now immune wholly or partially to the attacks of tubercle bacillus I feel reasonably sure, for seeing the ignorance that prevails still as to the infectiveness of the sputa and the prevalence of filthy habits in the public streets, seeing also the vast numbers of medical men and nurses and other attendants upon the phthisical sick who never suffer and also the very large proportion of married people who do not become infected by such intimacy, I think no one can doubt that almost every adult person has at least once in his life received into his breathing organs some of the bacilli and yet only a minority suffer. Also we must remember that although many have been so infected yet they have always resisted the bacilli with success, although in some instances there may have been a struggle to be undergone, such persons being as it were only imperfectly immune, as are, for example, vaccinated persons who have small-pox in the modified form. It is to the production of a more widespread immunity in the future that I look forward with greater hope than I can do to the complete eradication of the bacilli while heartily approving continued efforts in that direction also. To obtain this much-desired immunity I am convinced that the bolder, even the seemingly reckless, mode of life which cultivates hardihood as regards air and temperatures, &c., exerts all the faculties, and maintains the frame with ample foods, is more successful than the old coddling methods which under the euphemism "taking care" cultivated delicacy and made immunity difficult or impossible. If anyone doubts that such immunity does now exist let him consider that it is admitted on all sides that a state of susceptibility exists in some persons and that immunity for others is a natural correlative of this susceptibility and that the facts on which the belief of its existence rests are even more numerous and obvious.

I have not attempted to deal with the other possible, even probable, explanations of the reduction of the death-rate from pulmonary tuberculosis in recent years which, however important they may be as factors, are not so much under our control. I do not, however, doubt that some influence on our death-rate is now being exerted by the deaths in the past of the more susceptible people who were then the unfit. It behoves us now both in regard to private habits and usages and to public regulations to do what may be possible so to train up our children that they may not suffer the fate of the unfit. It will be said with no little force that I have been too optimistic in looking forward to the production by more perfect sanitation of such a large measure of immunity. However, after half a century of experience in practice I am not discouraged overmuch, for I see progress if slow. There remain, however, many giants to be slain and among them one against which I have before tried to do battle—viz., the fear of "catching cold" whenever the ventilation which is needful for perfect health is approached. This one, however, has been logically vanquished by the practice adopted in many sanatoria, for it will not, I think, be possible to maintain that currents of air which do good to a phthisical person do harm to a healthy one.

I am, Sirs, yours faithfully,

Nottingham, Nov. 28th, 1898. W. H. RANSOM.

To the Editors of THE LANCET.

SIRS,—Many of us, no doubt, have been seriously considering the proposals to establish in all parts of England open sheds for the residence of consumptives while undergoing the "open-air treatment." Probably many practitioners, though fully convinced of the great importance to health of a good supply of fresh air night and day, feel some

doubt whether during the winter part of the year in our climate the system proposed will be found advantageous in many cases or at all stages of the disease.

Having been accustomed from early youth to be out in all weathers I have enjoyed for some years past the advantages of a large shed or verandah open to the west and south, but well protected towards the north and east, and have often wondered why so few houses in the country are provided with verandahs having glass roofs and large enough to be used as an extra room. Mine is about 36 ft. by 15 ft. The back is formed by the house wall, and the north end and the roof are glazed. It is entered from the short staircase of the cottage. The floor is of wood and is partly covered by carpet. There is ample space for tables, chairs, and other furniture. The soil around and in the neighbourhood consists of sand, peat, and gravel. Fir trees, rhododendrons, and other evergreen trees and shrubs abound and grow freely. An extensive fir wood surrounds three sides of the small wild garden and at the back is an open common. It would probably be difficult to find within easy distance of a large city a place more suitable for outdoor living as proposed, and I have often thought that if unfortunately my air-cells were invaded by a tubercle bacillus I would move my bed into the protected corner of my open-air apartment. In moderate weather it would no doubt be advantageous to do so, and perhaps it would be pleasant. But to attempt this all the year round would be to most of us, however healthy and strong and accustomed to fresh air in all weathers, anything but comfortable. Now this is the fourth day of rain and storm and morning and afternoon mist and fog. To spend even two or three hours and take one's breakfast and dinner in such a place in such weather would be very depressing and would make some people quite wretched. Even the most philosophic and placid of mankind would soon long to warm himself before a good roaring fire. To live under conditions so dreary week after week would, I should think, except to the very strong and thoroughly robust, be almost unendurable. Think of the turning out and dressing and breakfasting in the cold wet fog, and of the going to bed in the dismal drizzle, or when a cold wind was blowing hard. Surely the lot of the soldier exposed to the worst weather and all the hardships of an arduous campaign in winter would be preferable.

In advising a course of action supposed to be to the advantage of the bodily health ought we not also to think of the probable effect of the suggested treatment upon the patient's mind? For although many phthisical persons are hopeful and sanguine and often in good spirits even when seriously ill, I fear life in the contemplated sheds in many parts of England in such weather as we have lately enjoyed would not be happy. If the plan is to be acted upon here, it is to be hoped that only highly favoured localities, where there is natural protection from the north and east winds and where the shed may catch every possible ray of the sun at this time of the year, will be chosen. But under very exceptional advantages it would probably soon be found that something much more lasting and far more costly than sheds and shelters would have to be provided in the vicinity, for some of the cases placed under the open-air treatment.

I am, Sirs, yours faithfully,

Nov. 26th, 1898. LIONEL S. BEALE.

To the Editors of THE LANCET.

SIRS,—Staff Surgeon A. G. P. Gipps in an interesting letter in THE LANCET of Nov. 26th called attention to the danger of investing capital in providing homes for phthisical patients (or perhaps a better name is "kurhaus," the term I noticed used in the beautiful Austrian Tyrol) because our climate lacks the dry air and sunshine of Davos, Falkenstein and so on. If you will permit me I would like to point out that these defects which are grave and serious ones are capable of remedy to a great extent so that those who cannot leave England for these far-off places may still enjoy a climate in some respects better. Twenty years ago I read with interest that if you cannot afford to go to the Riviera then you should bring the Riviera to your own home by building glass houses. This I tried about twelve years since, building a large glass house opening from my drawing-room by a French window. The cost, with a saddle boiler which heated drawing-room and greenhouse, also the aviary if desired was £100, It has always acted well, providing any climate we wished, protected from rain, fog, wind, cold, and providing means for exercise and recreation for my children, friends, and visitors, &c, in a pure atmosphere at all times. I had better state that I live in Sherwood Forest on the new red sandstone at a height of 200 ft. above sea-level and the glass-house is glazed with rolled plate-glass excepting where we wish to look out; this affords a sufficient shade from the sun in summer without blinds or limewash, &c. The floor is of Minton tiles and waterproof. Not only have we a splendid climate, but if we wished we could make it pay its own cost by growing roses and other flowers, so that we could provide occupation, amusement, and recreation, in which our English watering-places are so very deficient.

One point I have forgotten—want of sun in winter, which is a great evil; but on our east coast, especially in such places as St. Andrews, Deeside, and Bridlington Quay there is a great deal of sunshine—that is, of course, because the rainfall and clouds are less; but there is another point. The electric light has proved useful in the growing of flowers and might serve to produce light in place of sunlight, though whether it would be as health-giving would require to be proved. The cost of an oil engine producing about forty lights of twenty and thirty average candle-power is £200 and then the cost of maintenance is equivalent to the cost of the same light by paraffin lamps, so that really the outlay would be £200 with cost of renewal of machinery when worn out.

I am, Sirs, yours faithfully,

Dec. 5th, 1898. M.O.H.

INTUSSUSCEPTION TREATED BY LAPAROTOMY.

To the Editors of THE LANCET.

SIRS,—May I add the notes of another case of intussusception to the series that appeared in THE LANCET of Nov. 12th, 1898?

On August 13th, 1898, a female infant, five months old, was admitted to the Leeds Infirmary, with a history of pain in the abdomen, vomiting, and of passing blood-stained motions and some mucus. The child had only been ill for four days. On admission a sausage-shaped swelling could be felt in the region of the cæcum and extending across the abdomen. On the afternoon of admission ether was administered and an incision about 2½ in. long was made in the middle line of the abdomen. On passing the hand into the abdomen an intussusception was felt and that part of the bowel was brought outside the abdomen. The intussuscepted part was found to be ileum into cæcum and ascending colon. The intussusception was easily reduced and was then returned within the abdomen. The abdominal wound was closed. The patient was discharged on Sept. 6th well.

I am, Sirs, yours faithfully,

W. H. BROWN,

Dec. 5th. Surgeon to the General Infirmary at Leeds.

"OBSERVATIONS ON AN INFECTIOUS DISEASE IN LASCARS HAVING CLOSE RELATIONS WITH VARIOLA AND VARICELLA."

To the Editors of THE LANCET.

SIRS,—We have read with great interest the letter in THE LANCET of Nov. 19th by Dr. Izett Anderson in which he refers to our paper on the above subject. His letter is of special importance as corroborating in certain respects some of our impressions of the disease referred to, as its comparatively slight infectivity, unless among communities closely confined, as on board ship or in penitentiaries. The fact that none of the patients who came under the care of Dr. Izett Anderson died likewise agrees with our own experience, though this was necessarily limited. It is obvious when we take this latter point into consideration that the disease is not to be regarded as of importance except in so far as it may be mistaken for variola, and we question whether it would not be an exceedingly difficult matter to recognise sporadic cases of this disease in a community in which small-pox is more or less endemic. In the outbreak recorded by Dr. Anderson as well as in that observed by ourselves the cases were very favourably placed for observation in so far as they were seen at a time when small-pox was absent, with which therefore they could not be confused. In a community where small-pox and this

disease coexist it is clear that a certain amount of difficulty must present itself regarding the relation of the two diseases to vaccination. In Dr. Izett Anderson's letter it is stated that the disease occurred "in old and young, vaccinated as well as unvaccinated, and also in some who had had severe attacks and were deeply pitted by antecedent small-pox." Our own experience was precisely the same as this, but in addition, as stated in our paper, the patients were susceptible to vaccination during the course of the attack and were not protected from the disease by antecedent successful revaccination, while two unvaccinated individuals who mixed freely with the diseased lascars were not affected.

This unusual behaviour towards vaccination is entirely contrary to our experience of small-pox, as observed in Britain, and at once suggests the possibility of the existence of two diseases closely resembling each other in their more important clinical features but entirely different in their cause and in their influence on man. As stated in our paper we have invariably failed to vaccinate successfully persons who have just passed through an attack of small-pox, while the number of successfully revaccinated persons contracting small-pox is so small that out of upwards of "14,800 cases received into hospital [Metropolitan Asylums Board report] only 4 well-authenticated cases were treated in which revaccination had been properly performed." This corresponds with our own experience in Glasgow.

In addition to these considerations the differentiation of the disease from small-pox is suggested by various official reports which have appeared from time to time concerning India and other Eastern countries. The anomalous behaviour of vaccination and inoculation so frequently mentioned in these reports may be explained by assuming that many of the so-called inoculations have been performed with lymph derived, not from cases of true small-pox, but from patients suffering from the disease we are now discussing. In the Army Commission Report,[1] 1879–80, for the Central Provinces of India it is stated that in Sambulpur town, when small-pox broke out at that time, "it attacked those who had been inoculated, vaccinated, and had previously had small-pox....301 persons who had been inoculated took the disease out of a total of 1607 cases." This is so glaringly contrary to the generally accepted opinion with regard to the protective efficiency of inoculation that comment is needless.

In the sixth report of the Royal Commission on Vaccination, Appendix 15 Art. Japan, Table IV., is a report on the Tokio small-pox epidemic of 1891–92, in which 5215 cases of small-pox were observed, of whom 260 are stated to have had small-pox before. Of these, 80, or about 30 per cent., died. Here both the proportion of second attacks and the death-rate are so striking as to suggest either that the information derived from the patients regarding a previous attack of small-pox was erroneous or that the first attack of so-called small-pox was not small-pox at all but a disease resembling it in its clinical features though differing from it in respect of its protective influence against variola. Examples of this kind might readily be multiplied.

In conclusion, we would suggest that statistics with regard to the relationship between small-pox and vaccination, which indicate so marked a discrepancy from the opinion generally held, demand a most careful investigation by those who are in a position from their experience of small-pox in the east to carry on the work inaugurated by the publication of Dr. Izett Anderson's paper in 1867.

We are, Sirs, yours faithfully,
R. S. THOMSON, M.D. Glasg.
JOHN BROWNLEE, M.D. Glasg.

City of Glasgow Small-pox Hospital, Nov. 28th, 1898.

DIPHTHERIA ANTITOXIN.

To the Editors of THE LANCET.

SIRS,—Having recently read before the Hunterian Society a paper which dealt amongst other things with the effect of the antitoxin treatment on the fatality of diphtheria in London I have perused with much interest Dr. Cobbett's paper which appeared in the last issue of your journal. With respect to London he has come to exactly the same conclusion as that to which I arrived when he states that "the new remedy has been more readily adopted by the hospital physicians than by general practitioners." Fig. 1 in Dr. Cobbett's paper shows that whereas formerly the fatality of cases of diphtheria admitted to the Metropolitan Asylums Board's hospitals was considerably higher than that of all the cases occurring in London (that is to say, for both those cases admitted to hospital and those not admitted), since 1894 the difference has been lessening and in 1897 the fatality of admitted cases was slightly less than the fatality of all the cases. But I think that Dr. Cobbett understates the case. Comparing the figures given in Table 3 of his paper with the figures given in the reports of the Statistical Committee of the Asylums Board I gather that by "admissions" Dr. Cobbett means the admissions when corrected for errors of diagnosis and not the number of notified cases admitted. A considerable number of cases, for the most part mild in character, are not reckoned amongst the diphtheria admissions at all, and the figures Dr. Cobbett gives do not include these cases. On account of this correction it has always been impossible to accurately compare the fatality of the admitted cases with those not admitted, for it may be safely assumed that a considerable proportion of the latter are not cases of diphtheria. Hence curves B and C in Fig. 1 of Dr. Cobbett's paper cannot be accurately compared one with the other. It seems to me, however, that a more accurate comparison can be made. We know exactly the annual number of deaths from diphtheria in and outside the Asylums Board's hospitals. We also know exactly the yearly number of notifications. We can also obtain accurately enough the number of notified cases admitted to the Asylums Board's hospitals. In the Statistical Committee's report for 1897 the actual number of these cases for that year is given, but for previous years the percentage alone is stated, from which the number admitted can be calculated. From these data we can calculate the fatality of notified cases admitted and of notified cases not admitted and we can then compare the two rates. In my paper I drew up a table showing these rates since 1892 as follows:—

—	1892.	1893.	1894.	1895.	1896.	1897.
Fatality per cent. of all notified cases	23·8	24·5	24·7	21·2	19·4	17·4
Fatality per cent. of all notified cases admitted to M.A.B. hospitals	24·8	27·1	25·0	18·3	17·7	14·9
Fatality per cent. of all notified cases not admitted to M.A.B. hospitals	21·5	23·7	24·5	23·3	21·3	20·1
Percentage of notified cases admitted to M.A.B. hospitals	30·1	24·5	33·8	41·5	39·9	51·4

This table shows, but more emphatically than Dr. Cobbett's tables, that whereas the fatality of hospital-treated cases was up to 1894 greater than that for the whole of London, since that year the reverse has been the case. It also shows that the improvement in the fatality rate is more marked in the hospital cases than in those not admitted to hospital. It further shows that there has been some improvement in the fatality of the cases not admitted, a fact also pointed out by Dr. Cobbett. It is very uncertain that the improvement in these last cases is due to the use of antitoxin. Doubtless some cases are admitted to the general hospitals and are treated in them with serum. Possibly the improvement may be due to that fact, but if so it only emphasises Dr. Cobbett's statement quoted above to the effect that outside hospitals the antitoxin is little employed. I have no doubt myself that this statement is perfectly true. My experience at the Eastern Fever Hospital, where there have been for eighteen months past about 200 beds set aside for diphtheria, leads one to say most emphatically that in the East-end of London, at any rate, the employment of antitoxin in the treatment of diphtheria is the exception. It is very rarely that a patient is admitted who has been treated with antitoxin before admission, even when he has been ill for several days. And from what I know personally of the action of the remedy I have no hesitation in saying that there are hundreds of children who die every year in London for want of its timely employment. I say "timely" because although of recent years the Asylums Board have been admitting a large proportion of the notified cases, yet the proportion of cases admitted at an early stage of the disease seems to be diminishing.

I must apologise for the length of this letter, but the subject is important. We have a remedy for a very fatal

[1] Vaccination Commission Minority Report, par. 227.

disease which by consent of the majority of those medical men of all countries who are best qualified to pronounce an opinion is of the greatest value in the treatment of that disease. Yet of this disease the children of the poor are still allowed to die in their hundreds annually in this wealthy city of London, largely for want of the remedy. Why this should be is worthy of the most careful inquiry. Dr. Cobbett is to be thanked for drawing attention to the fact.

I am, Sirs, yours faithfully,

Homerton, Dec. 4th, 1898. E. W. GOODALL.

AN ENTERPRISING AGENT.

To the Editors of THE LANCET.

SIRS,—I have sent a copy of a printed letter to each of the practitioners here and am sending one now to each at Tewkesbury, Upton-on-Severn, Bromyard, Ledbury, and Kempsey, which contains the following passages:—

> Two practitioners here have informed me that the following offer has been made to them by a man representing himself as an agent of an insurance office. In return for placing the practitioner's name on a card as medical officer the agent would use his influence to obtain patients for such medical officer, offering 1*d.* per week for each male or female adult, and ½*d.* for each child, without any wage limit or other restriction. This offer has been absolutely declined. I send this circular to you that you may learn what has been done and confidently suggest that no self-respecting member of our profession would accept such terms.

Had the terms offered been accepted it would have followed that the practices of neighbouring practitioners would have been exploited for the good of the medical officer. I hope you will be able to expose such a nefarious scheme in the pages of THE LANCET.

I am, Sirs, yours faithfully,

St. Michael's, Malvern, Dec. 6th, 1898. STANLEY HAYNES.

*** We do not know that further exposure is required from us. Readers of THE LANCET know that this is a method of tactics which has been adopted by certain medical aid associations. We commend Dr. Haynes's prompt action. After receiving the circular letter no medical practitioner in the neighbourhood can accept the enterprising agent's proposals without knowing that he is defying the opinion of his professional brethren.—ED. L.

BRITISH MEDICAL BENEVOLENT FUND.

To the Editors of THE LANCET.

SIRS,—I shall be much obliged if you will kindly insert this appeal in your columns. For many years I have received and distributed articles of clothing for men, women, and children and am now practically without. I should be glad to have anything that can be spared, such as hats, jackets, dresses, or underclothing for women, or blankets, boots and shoes, old furs, overcoats, or anything, in fact, that has some wear in it and likely to be useful.—I am, Sirs, yours faithfully,

16, Upper Berkeley-street, W., Dec. 3rd, 1898. EDWARD EAST.

"THE CONSCIENTIOUS OBJECTOR."

To the Editors of THE LANCET.

SIRS,—I do not agree with Dr. Woodward's remarks on vaccination certificates in THE LANCET of Dec. 3rd.

Though strongly opposed myself to this new Act—one of the most mischievous, I think, which the present Government has passed—still I do not consider it is right for our profession to suggest to magistrates a series of questions which will make it even more difficult than it is now for conscientious applicants to obtain their certificates.

The very fact of many such applicants being so often willing to lose half a day's work plus the fee for certificate when they could have their children vaccinated entirely free of any expense should tend, I think, to make one believe in the earnestness of their convictions and so shield them from being unnecessarily heckled. Much as I should rejoice to see this Act repealed, yet so long as it is in force magistrates have only to administer the law (which was evidently meant to bear a liberal construction) without allowing their private opinions in any way to bias their judgments to the detriment of the petitioner. I am, Sirs, yours faithfully,

Dec. 3rd, 1898. J.P., F.R.C.P.

AN ACADEMIC GOWN FOR THE MEMBERS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

To the Editors of THE LANCET.

SIRS,—I much regret that through the lateness of the hour my somewhat hurried sentences prevented clearness of expression and that you failed to grasp my reasons for the utility of a distinctive academic garment for the operating surgeon. I certainly did not say or do I think that a "flowing robe" would be desirable *per contra;* I said "*not* in the flowing gown of the learned Roman nor exactly in the surplice of the clergyman," but I thought some suitable white washable garb for the operating surgeon was both desirable and *needful* and would be a great improvement to the somewhat gruesome appearance of many of our operating surgeons in their private practice. I have seen very hideous coverings worn by operating surgeons and the "mackintosh apron" you speak of is quite the exception. One surgeon I know used to wear his old worn-out dressing-gown for hospital operations. A proper recognised operating costume would, too, be not only cleanly but of hygienic value. For State occasions some different and more scholastic gown would be appropriate, I opine, for I believe I have read of the toga prætexta with its purple border, the toga virilis, the toga picta of the classic Roman, sometimes embroidered with gold, and I think there was nothing unseemly in my suggestion that the Fellow should have a purple hem or some other distinction from the ordinary Member denoting his special rank. Better thus than that the line of demarcation should still further be widened and that the Fellow should be given collegiate dress to the *exclusion* of the more numerous and scarcely less worthy and intelligent Members.

The time will doubtless come when every physician or surgeon will as a matter of routine don his gown and his academic sash will be on his table when in his consulting-room. The utility of this will be even to you, Sirs, probably obvious, although you may not have felt, as I have felt, the inconvenience or experienced the unfriendly gaze of your patient who has consulted you when you have been clad in boating or cricket costume, to saying nothing of the hunting field or the familiar suit of the cyclist or even of our plain evening dress. These frivolities are not *contra bonos mores* or against professional skill and diligence; yet who has not at times felt he would have been glad to have hastily covered these signs of avoiding or trying to avoid dull care or gloomy thoughts by hastily donning the academic robe and assuming at once the naturally thoughtful expression and sagacious countenance of the successful and friendly medico which will so fittingly become the scholarly *rôle* of your future surgeon?

I am, Sirs, yours faithfully,

THE SECONDER OF THE RESOLUTION FOR THE ACADEMIC GOWN OF THE M.R.C.S.

Dec. 5th, 1898.

THE SICK AND WOUNDED AT OMDURMAN

To the Editors of THE LANCET.

SIRS,—As the medical officer in charge of one of the barges which left Omdurman on the morning of Sept. 4th and on which the wounded received attention from the 2nd, will you allow me to answer the letter of Major-General Russell which appears in the *Times* of to-day, and I will take the statements he puts forward *seriatim*. Firstly, the wounded were not packed like sardines but had ample space, the mere fact that the angarebes or native beds on which they were lying measured in some instances more than 3 ft. across making it an impossibility to accommodate more than a limited number on the deck. Secondly, native beds were at hand, and were in excess of the requirements, and were used in every case on my barge where I considered them necessary. Thirdly, the operations performed by myself and my junior officer (amounting in all to 12) whilst on the way down the river were performed on a special operating-table which I had with my field hospital during the entire march and subsequent action, and which was thought by us to be of so good a pattern that it was used subsequently for every operation that was performed at the Abadia Hospital. Fourthly, my operating space on the barge was in the stern and it was carefully screened off and enclosed on both sides

and ends from observation, and patients were as comfortable in it as in a building and not a single operation was undertaken "on irregular piles of ammunition boxes" for two reasons—firstly, because we had an excellent operating table and, secondly, because there were no ammunition boxes on the barge. Fifthly, the chloroform was not blown away and, as we were working under the upper deck, the "piercing rays of a burning sun," described by the correspondent of the *British Medical Journal*, would have had to penetrate 4 in. of planking which made up the floor of the upper deck and the roof of the barge above this. In conclusion, I must state no operations, with the exception of a very urgent one, were performed on the barges until Sept. 3rd, on which date plenty of native beds were obtainable.—I am, Sirs, yours faithfully,

MEDICAL OFFICER IN CHARGE OF
Dec. 5th, 1898. NO. 1 FIELD HOSPITAL.

THE EPIDEMIC OF TYPHOID FEVER AT BELFAST.

SECOND YEAR.

(FROM OUR SPECIAL COMMISSIONER.)

(Continued from p. 1437.)

THOUGH both the private drains and the public sewers of Belfast are most defective and the subsoil is extensively contaminated there are still persons who persist in maintaining that the real fault lies with the water-supply. Personally I have been blamed for not going to inspect the catchment grounds and for not emphasising the risk that the water-supply incurred of being specifically contaminated. Nevertheless, in my report published in THE LANCET of Nov. 27th, 1897, I mentioned that a list of 16 farmhouses had been given to Dr. Frankland, who was then investigating the question of water-supply, where the drainage from stables, manure heaps, houses, &c., discharges either into the subsoil or the adjoining small water-courses which are all situated on the Stoneyford gathering ground supplying Belfast with drinking-water. Further, I added: "At the commencement of the year there were four cases of typhoid fever in one of these farmhouses, and it is urged that it was only after these four cases on the gathering ground that the fever became so general in Belfast." Such, briefly, was the contention brought forth last year and it was met by the fact that typhoid fever was endemic in Belfast and that the deaths from typhoid fever were much less numerous during the first than during the last three-quarters of the year. If the epidemic had been caused by contamination of the water at the date mentioned it should have occurred during the first three months of the year and should have been much more widespread. As a matter of fact it was just when the water was supposed to be contaminated that there were the fewest number of deaths from typhoid fever—namely, 58 deaths up to April 3rd, 1897. During the second quarter of the year there were 100 deaths, 81 deaths during the third quarter, and 97 during the fourth quarter. At the farm in question the cases occurred in February, 1897, and they were described as gastric fever. It was not till the following October or November that water samples were taken from the little brooklet into which this farm is likely to drain. The water taken above the farm was not so pure as that taken below the farm.

But all these details are of little or no importance. They mainly serve to divert the population from the chief points at issue. It is admitted, it must be admitted, the Water Commissioners themselves do not attempt to deny that contamination of the water catchment may occur. Where there are farms and manure this is inevitable; and at any moment cases of typhoid fever may take place among the farmers who live on the catchment area. How often have typhoid dejecta reached the Thames from the 1,250,000 people who live above the water intake of the London supply? The safety of the people of Belfast depends not on the condition of the catchment but on the filtration of their water-supply. As a rule this filtration removes from 97 to 98 per cent. of all the bacteria which the water contains. This, the result of Dr. Frankland's analyses, is confirmed by those of the Local Government Board analyst, Professor Hodges, and by Mr. Barclay, teacher of chemistry, analytical chemist, and member of the Belfast Corporation, therefore it may be considered very satisfactory. As for the catchment area it was selected at a time when the rapid growth of Belfast was not fully foreseen, and the farms have sprung up since that time. As a consequence, and at a cost of £610,000, new gathering grounds have been secured in the Mourne Mountains and works are now proceeding to bring this new supply down to Belfast. For this purpose a conduit 38 miles in length will have to be built and no one disputes the purity of the new supply. This vast undertaking was fully described last year, but it will require some time to carry out. In the interval the best must be made of existing circumstances. The position differs from that which prevails in England and it has its advantages and disadvantages. In England farms generally vary from 100 to 300 acres in size and have but one house. In Ireland they vary from 10 to 40 acres and each farm has its house. The Irish farmers are poorer and more dirty. Consequently they are individually more dangerous to the water-supply. On the other hand, these small farms are generally taken for grazing purposes—they are not tilled and manured as in England. But it is very difficult to move these small farmers. They farm according to tradition and are quite impervious to all claims of modern city life. They pay their rent and place their manure heap where most convenient to themselves. Belfast and its water-supply is no concern of theirs. The Water Commissioners have even tried to purchase some of these farms, but the farmers will not sell. Recently the former spent £30 in laying drain-pipes so that the water from a farm might be diverted from one of the town-supply conduits and made to pass under it. There are certainly legal powers which might be employed, but it is necessary to prove that there is pollution, and at present the sanitary officers do not seem willing to swear that a privy situated at a distance of 500 yards from a water reservoir is a nuisance. The Water Commissioners recently caused a concrete tank to be installed in the place of an ordinary privy at a school which was situated about a mile away from the Leathemtown reservoir. This hesitation seems to indicate weakness on the part of the sanitary authorities. The law should be strong enough to suppress all leaking privies, whether there be a water-supply conduit near to them or not. The precautions ought not to be taken only by the Water Commissioners. For instance, at the present moment the main gravitation conduit from the Woodbourn supply is being dug up and altered for a distance of three-quarters of a mile as it passes through the Antrim-road district. This conduit was completed in 1868 and is made of brick and cement. Now as this neighbourhood is being opened out for building purposes iron pipes are substituted for the brick conduit. On the other hand, any sewers or drains passing across the easement of the water conduit must be made of water-tight metal pipes laid under the supervision of the Water Commissioners. This is good so far as it goes, but no sewer should leak, whatever may be the material with which it is made and wherever it may be placed. Two years ago two-thirds of a mile of iron piping was substituted for the brick and cement water conduit which passed near to the Throne Hospital. The fear was then entertained that the water might get contaminated, but this cuts both ways, for if it shows lack of confidence in the water conduits it also indicates that the drainage was likely to be unreliable. It may, however, also be said that brick conduits cannot stand the heavy traction of a growing city, and big, heavy carts are less likely to break iron pipes. Of course, as the town extends the underground conduits must be of iron.

Having regard to all the circumstances Belfast seems to be in quite as favourable a position with respect to its water-supply as most towns and in a better one than many, and in 1901 a new and much better supply will be available. Then, as mentioned before, a water epidemic would produce a far greater number of cases occurring in a briefer space of time. Nor is Belfast the only place afflicted with typhoid epidemics when there is every reason to believe that the water-supply is not contaminated. Sir Charles A. Cameron, medical officer of health of the political capital of Ireland, at the recent Public Health Congress, insisted that the Dublin water-supply was of exceptional purity, yet with the exception of Belfast no town in Ireland had a higher death-rate from typhoid fever. Typhoid fever prevailed in Dublin because the subsoil was contaminated by

leaking sewers, drains, and cesspools. As these were removed public health improved, but the micro-organisms of this disease could retain their vitality in the soil long after the cause of pollution had ceased. Sir Charles A. Cameron added that the "connexion between enteric fever and the soil is shown by the results of observations of the distribution of more then 4000 cases of the disease in Dublin. Where gravel forms the site of the streets there is far more typhoid fever than in the districts which rest upon the stiff boulder clay. This is clearly owing to the fact that the bacillus typhosus, which is aerobic—that is, requires oxygen—can get it more freely in the loose gravel than in the stiff clays. In the gravel, too, there is much greater space for the development and movement of the bacilli."

When Mr. Dunlop, speaking on behalf of a deputation opposed to sanitary reform, urged upon the Belfast Town Council that he owned many houses with privy closets where no case of typhoid fever had occurred, he forgot to mention that they were, for the most part, built on clay soil. The real problem for Belfast to solve is the purification of the subsoil in those extensive portions of the town where it is composed of sand or of rubbish. These are traversed by streams which have become sewers and sewers which have become cesspools. Then there are house drains which leak and privies which are not watertight. As Dr. Brouardel said of Toulon, the home of typhoid fever and of cholera, so may it be said of Belfast, "the town stands on a fæcal soil." Councillor Dr. O'Connell expressed at the Town Council his opinion that the Blackstaff stream, as it passes through Belfast, received the drainage from some 10,000 people and he thought that most of the sewers in the town would have to be relaid. There were heavy deposits in these sewers and till this state of affairs was rectified the typhoid fever epidemic would recur over and over again, especially after prolonged dry weather.

To remedy these most unsanitary conditions it is proposed to obtain special powers from Parliament so as to impose the water-closet system on all houses, to test all existing domestic drains, and to introduce back passages where these do not exist. This sounds well, but how are the water-closets to be drained. If they are to be led into the existing drains the second condition may become worse than the first. At present many houses drain into a private drain which passes through the back yards and only joins the public sewer where the row of houses is cut by a street running at right angles; thus a private drain behind the houses of a street running from north to south will fall into the public sewer of the first street it meets running from east to west. If there is a stoppage in this private drain the drainage from all the houses above the stoppage will be blocked. This is bad enough where, as at present, in houses with privies this private drain only receives the rain water, the scourings of the back yard, and the slop water, but it would be worse still if these drains also received the contents of water-closets. Again, as these are private drains, they must be repaired by the house-owners and are consequently very generally neglected. Rack-renters and speculators in poor property cannot be trusted to keep such drains in order. It stands to reason that these private drains should be converted into public sewers and placed under the supervision of the public authorities. Where at present there are two private drains running parallel in the yards of two rows of houses which stand back to back they should be replaced by one public sewer draining the houses from both sides. Where there is no back passage 2 ft. of space should be taken off the yards on either side. This would make a passage 4 ft. wide, under which a proper public sewer might be laid which could be constantly inspected by the sanitary authority and repaired at once when any accident occurred. As it is, if the private drain is out of order it may remain in that condition for weeks and months before the mischief is discovered and legal proceedings are successfully taken against the landlord. This back passage would also serve for the removal of the contents of the dust bins. If, however, the back yards are so small that there is absolutely no room for cutting a passage through them the whole property should be condemned and pulled down. Nor would this be an extravagant proceeding. On the contrary, a good deal of money could be made out of the transaction, for the houses which come under this catagory are of such a wretched description that it would pay to build in their stead a better class of property. This would have the further advantage of improving the appearance of the town—a phase of reform which, from the æsthetic point, is as urgently needed as is a better sanitation from the public health point of view. To demand power for the compulsory enforcement of the water-closet system without first securing powers to construct proper public sewers would be to place the cart before the horse. The private drains which exist are not fit for such a purpose nor can they be controlled with sufficient promptitude by the sanitary authorities.

Councillor Miller has made a proposal on these lines to the Public Health Committee; and, further, he explained to me that it might be worked financially in such a manner as in a great measure to cover the cost of some compensation to the owners. Councillor Miller calculates that the expenditure would be something like £7 10*s.* per house, of which sum the house-owners should pay £5 and the town £2 10*s.*; or, in all, about £50,000. But under the present conditions the cleaning of the privies, &c., costs the town about £4700 per annum. The borrowing of £50,000 would cost in interest and amortisation some £3400 a year, so that an economy of about £1000 a year might be realised. But there are strong objections made to the giving of any compensation to the owners. Certainly if the actual owners were alone guilty of creating the present unsanitary state of affairs they ought not only to be made to pay the entire cost but they would also merit some form of punishment. Unfortunately a great part of this bad property is now owned, not by those who built the unsanitary dwellings, but by innocent purchasers. The ratepayers of Belfast so far neglected their duty as to elect officials who sanctioned the erection of buildings which would obviously become unfit for habitation. The present owners in many cases trusted the town council and claim to be the victims of incompetency. The result is a high death-rate and permanency of typhoid fever in Belfast. If to rectify matters the purchaser must sacrifice 2 ft. of space in his backyard and pay £5, may not the ratepayer be called upon to pay £2 10*s.* as an atonement for his share in the bringing about of the present disastrous conditions? The elected were to blame—they sanctioned what they ought never to have allowed; but why did the electors vote as they did?

The Bill to be presented to Parliament as it now stands is vague. After numerous details about tramway lines and miscellaneous matters comes the following short clause: "To confer powers on the corporation to require the owners or occupiers of houses to provide water-closets and from time to time to lend to such persons money to assist them in this object." And in another clause: "To divert, alter, and remove sewers, drains, tubes, wires, pipes, and apparatus," as may be necessary in connexion with the various proposed works. This may be a sufficient description of what is supposed to be intended; but should not this be accompanied by a detailed plan? It is all very well to build water-closets, but where and how are these closets going to be drained? Surely not in the ineffective private drains which exist. And where are public sewers to be placed for those houses which have no back passages? Then the actual main sewers are not big enough to carry off the water when it rains heavily. Floods are of constant occurrence. What will be the condition of the public sewers when some 20,000 additional water-closets drain into them? If floods are to bring back the contents of the closets and deposit them on the floors of the houses the fewer closets which communicate with such sewers the better. Not that the present privy system is to be maintained for a day longer than necessary, for the flood waters also reach the privies, lift their contents, and carry them into the houses. But is it not evident that the Bill should comprise a scheme for the modification of main and branch sewers of the town?

(To be continued.)

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

The Pasteur Institute for Hyderabad.—The Plague Commission.—The Progress of the Epidemic.—The Native Chiefs' Health Institute.

THE following details have been published concerning the Pasteur Institute at Hyderabad. It is expected that His Highness the Nizam will lay the foundation-stone of the new laboratories next week. The idea of a properly-equipped Pasteur Institute for Hyderabad was originally conceived and

is now taken in hand by Colonel E. Lawrie, I.M.S. It has been supposed that such an institute can only be worked satisfactorily in the cool climate of the hills, but it appears to the Nizam's Government that it will be more satisfactory to work it on the plains under conditions which obtain naturally as regards heat, moisture, and climate generally. The institute will aim solely at being of practical use to the Government and the Medical Department, to the numerous private practitioners in the Deccan, and to the public. It is said that the institute will be provided with the necessary laboratories, well stocked with all the latest scientific appliances, and it will adjoin a hospital which is maintained by the British and Nizam's Government jointly. It will therefore be available for the accommodation of patients of all classes of both Governments alike. The institute is not only meant to afford rapid help to all persons bitten by poisonous animals and thus save them from suspense and loss of time and money, but it is intended that the fullest possible bacteriological, chemical, and pathological investigations shall be undertaken in order to throw light on the common and widely fatal diseases of the climate of India. The educational side of the institute will be one of its principal features. The student of the local medical school will be trained in the most modern methods of observing, treating, and preventing disease, and by degrees all hakims and hospital assistants at present in the service of the Nizam's Government will undergo practical training in all that is necessary in these methods. One of the adjuncts of the institute which has proved of immense value in the recent investigations into the pathology of plague and malaria will be a photographic laboratory. The institute will be superintended by a Hyderabad medical officer who has recently undergone special training in Edinburgh, Paris, and Berlin. The whole scheme is entrusted exclusively to Colonel Lawrie. One cannot but admire the spirit and enterprise which has prompted such a scheme, and if from the above outline it seems somewhat ambitious yet it will doubtless be of great educational benefit. The programme is sufficiently exhaustive to satisfy the greatest enthusiast.

The Government resolution concerning the Plague Commission says: "A number of interesting facts have already been collected and embodied in different reports regarding the outbreak of this disease which has prevailed in India during the past two years, but there must be many valuable items of information to be ascertained from officers who have been employed on plague operations which have not been recorded in official reports, and there are also many circumstances connected with outbreaks in different places which require to be locally examined by persons who can collate facts and form conclusions." This expression of opinion only bears out what I wrote previously—that officers of the Local Government Board accustomed to investigate the outbreaks of infectious diseases are the men who are really wanted. The points for the Commission to investigate are: (*a*) the causes of the different outbreaks and the circumstances influencing their growth and decline; (*b*) the manner in which the disease is communicated; and (*c*) the effects of curative serum and of preventive inoculation.

The Presidency plague returns have not improved. There have been 6223 attacks and 4858 deaths recorded for the past week. In Bombay city there were only 59 deaths but there have been heavier totals in Broach, Thana, Dharwar, Bijapur, Baroda, and Kolhapur. In Dharwar district alone there were 2940 attacks and 2374 deaths.

At Bangalore there has been considerable trouble—riotous disturbances, a strike in the Conservancy department, high prices of food and materials, and concealment of cases. The disease is very rife, 627 cases and 522 deaths having occurred during the past week. From the date when the province of Mysore was first attacked up to the present time there have been 3292 cases and 2555 deaths. The epidemic is spreading in southern India. It has lately broken out in the goldfields of Mysore. Large numbers of coolies have become scared but inoculation is being pushed forward as rapidly as possible.

The Punjab after having been free for some months has suddenly developed a few cases at the town of Rahon in the Jullunder district. This town has a population of 11,000 and has hitherto marvellously escaped notwithstanding that it is situated on the margin of an area which has been infected during the past two years. It is an ancient and decayed town with few means of communication and it would be easy to temporarily suspend intercourse with neighbouring places. A few cases continue to manifest themselves every few days in Karachi city. Calcutta apparently remains free.

The Native Chiefs' Health Institute, the details in connexion with which have not yet been published, will have for its objects (1) the scientific study of bacteriology; (2) researches regarding the causation of disease; (3) the investigation of means for the prevention and cure of disease; and (4) the training of officers in bacteriology and to carry out investigations on the above lines. This seems very much like the programme of the Hyderabad Institute, more especially as it has been reported that the long-looked-for Pasteur Institute for India will be taken in hand and will form part of the Native Chiefs' Health Institute. Provided they are well supported there is doubtless plenty of work for both institutions, but it would be a great pity for the cause of science if one institution marred in any way the success of the other.

Nov. 19th.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Sewage Difficulties.

THE Public Works Committee of the City Council have presented a report on the condition of the sewers in the Edgbaston and Harborne districts. In this inquiry it was found that the sewers were in a faulty and in places dilapidated condition necessitating entire reconstruction to ensure efficiency and safety. The area reported on by the city surveyor comprises some 3625 acres with a population of 21,000. The bulk of these sewers were constructed between the years 1863 and 1879, consequently they have been subjected to much wear and are now inconsistent with the more advanced principles of present-day knowledge. Small brick sewers, with the bricks at places perishing, joints most imperfectly made, and the jointing material when used being now decayed, have given rise to accumulations of filth and escape of foul emanations which have resulted in numerous complaints. The problem has therefore to be faced with as little delay as possible. The scheme of the city surveyor has been considered by Mr. Mansergh, C.E., and with some modification adopted. It has been resolved by the city council that the sum of £155,000 be borrowed in accordance with the estimate proposed—a resolution which was passed at a subsequent meeting of ratepayers.

Electric Lighting.

A public meeting of ratepayers of the city was held on Nov. 26th to authorise and empower the corporation to apply to Parliament for an Act to authorise the transfer of the Birmingham Electric Supply Company to the corporation. The Lord Mayor (Mr. Alderman Beale) stated that they had purchased the concern for £420,000, which was at the rate of 10 guineas a share. A clause is added to the Act empowering the corporation to build branch schools of art, to make improvements in the Rubery Hill Asylum, and to pay for music in the parks. Already the gas and water undertakings have been acquired, and as the tendency of the present time is to municipalisation of large concerns for the public benefit there seems to be nothing needed beyond a cheerful acquiescence and the payment of the necessary costs.

Adulteration of Food.

A batch of offenders were recently brought before the magistrates and fined in various amounts for wilful transgressions in the adulteration of food. A butcher for selling diseased meat was fined £5, while a man who had sold diseased fish got off with £2 and costs. Another was fined £9 for selling margarine as pure butter, while a margarine manufacturer trading as the Elbercraize Creamery Company for not having his manufactory registered was fined in all £43 4*s*. It is doubtful whether fining, even in substantial amounts, is the best plan of dealing with fraudulent purveyors of food. A term of imprisonment when such offences are repeated by the same person would be more likely to stamp out this pernicious evil.

St. John Ambulance Association.

The eighteenth annual report states that during the year the accounts show a surplus of £19 6*s*. 7*d*. Twenty classes have been held, but still the association appears to be but poorly supported, the subscriptions received from the members amounting only to £7 12*s*. Three more wheeled

litters have been placed at the disposal of the city authorities at a cost of £36 to the local centre. It has been thought desirable that when on duty the members of the Birmingham corps should appear in some official clothing, and the question of uniform will be brought up at the annual meeting. Possibly some enthusiasm will be stimulated by an appropriate uniform.

Dec. 6th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Liverpool Crematorium Company: Seventh Annual Report of the Council.

THE Liverpool Crematorium Company has now entered on its third year's working. The annual report of the Council states that 23 cremations have taken place during the year ending Sept. 30th, 1898, which compares favourably with 7 in the first year. The working account of the first year showed a loss of £239 4*s*. 2*d*. In the second year the loss has been £70 5*s*. 6*d*. Thus progress is evident, but so slow as to be disappointing and discouraging. Nevertheless, the evidence of belief in the system as manifested by its adoption in unexpected and most varied quarters and by persons of weighty character encourages the committee to recommend perseverance, many signs indicating that adverse sentiment is gradually though slowly yielding. They continue to believe that the maintenance of a well-conducted establishment must eventually lead to the wider adoption of a system against which none but sentimental objections can be brought. At every cremation the operation has been completely successful and the manager and his assistant have now become thoroughly familiar with the work. There is no present occasion to ask for contributions for maintenance on account of the loss on the year. The response to the committee's appeal last year was larger than was necessary to clear off the adverse balance then existing and the debt to the bank is only a little more than £10. The committee again urge the desirability of expending about £400 to complete the columbarium, which for want of funds has been left unfinished. The building, garden, and entire establishment are in perfect and pleasing order. The crematorium is a handsome Gothic structure and is considered to be the finest of its kind in this country. In the opinion of Dr. Hope, the medical officer of health of Liverpool, the crematoria at Milan and other places on the continent which he has visited are not so appropriately constructed as the one at Liverpool.

Proposed Small-pox Hospital at Fazakerley: Powers to Supervise Shippons.

The Port Sanitary and Hospitals Committee of the City Council have recommended the purchase of a site at Fazakerley containing 30,669 square yards for the purpose of erecting 2 pavilions, to contain 22 beds each, for the accommodation of small-pox patients, at a cost of £3500. The ground adjoins a site purchased by the corporation some time ago for hospital purposes. The cost of the pavilions and accessory buildings, including furnishing and drainage, is estimated at £20,000. The City Council, on the recommendation of the Health Committee, are about to apply to Parliament for powers to enable them to make provision for protecting the public against the spread of diseases by the sale within the city of the milk of cows with diseased or indurated udders and for taking samples of milk within the city for the purpose of bacteriological examination; also for the entry of the medical officer of health or a specially authorised inspector into any byres or cowsheds or other places within or beyond the city where cows are kept from which milk is sent for sale within the city; also, to examine the cows therein for the purpose of ascertaining whether such cows suffer from diseased or indurated udders and for preventing the milk of cows so affected being sent for sale within the city.

The new Northern Hospital: Completion of the Nurses' Home.

The Nurses' Home of the David Lewis Northern Hospital has now been completed. The home, which forms part of the scheme of the new hospital, is an imposing structure in red Ruabon brick. There are 3 floors, each with 20 bedrooms and a sitting-room, in addition to 2 smaller sitting-rooms. Each floor is supplied with bathrooms, lavatories, box-rooms, &c. In the basement are other box-rooms, kitchen, scullery, larder, and a room in which lessons will be given to the nurses in cookery for the sick. The building, which is light and lofty, is supplied with excellent heating and ventilating apparatus and the sanitary arrangements are admirable. The furnishing has been carried out in a tasteful manner.

The Liverpool Medical Institution and the Treatment of Tuberculosis.

Dr. T. R. Bradshaw proposed the following resolution at the last ordinary meeting of the above society:—

That a committee be appointed to consider what further steps can be taken for the prevention of tuberculosis in the city of Liverpool and for the treatment of the disease in the human subject.

Dr. Bradshaw suggested some of the subjects with which the committee might deal: (1) the dissemination of sound views as to the nature of phthisis, especially that it is communicable, preventable, and to a large extent curable; (2) the provision on an adequate scale of sanatoria in the country; (3) the more effectual control of the sources of infection; and (4) the desirability of adopting some form of notification. The resolution, in the unavoidable absence of Dr. E. W. Hope (the medical officer of health), was seconded by Dr. E. P. Manby (the assistant medical officer). The members who were selected to serve on the committee are: Dr. W. Macfie Campbell (the president), Dr. E. W. Hope, Dr. Thomas Clarke (chairman of the Hospitals Committee of the City Council), Dr. James Barr, Dr. William Carter, Dr. Caton, Dr. N. Raw, and Dr. T. R. Bradshaw who will act as secretary to the committee.

Annual Dinner of the North-Western Sanitary Inspectors' Association.

Mr. F. Vacher, medical officer of the Cheshire County Council, presided over the eleventh annual dinner of the North-Western and Midland Sanitary Inspectors' Association. The company was large and representative, including medical officers of health of important towns, the Mayors of Birkenhead, Wigan, and Crewe, Professor Boyce of University College, Liverpool, and others. Dr. William Carter, in proposing the toast of the "North-Western Centre," commented on the constitution of the newly formed board for the examination of sanitary inspectors in so far as there were no sanitary inspectors upon the board. He advocated incorporation on the part of the association so as to afford them a better opportunity of improving their position by such reforms as independence of tenure and more adequate remuneration. Mr. William Stansfield (chairman of the centre) and Mr. H. H. Spiers (the honorary secretary) replied. The latter mentioned that there were now 321 members on the roll of the association, being an increase of 72 over last year. The Mayor of Wigan alluded to the reforms which had of late years been effected in sanitary matters in Wigan. He referred more particularly to the destruction of insanitary property and the building of model dwellings. Stress was laid on strengthening the ties between medical officers of health and sanitary inspectors. Mr. T. E. Sampson, the coroner of Liverpool, in proposing "The Visitors" spoke of the marked improvement in the dwellings of the poorer classes in Liverpool, a change which had been greatly brought about by the work of the sanitary inspectors. Dr. Hope, the medical officer of health of Liverpool, remarked that the Liverpool Water Committee in their scheme for water wells were at present appointing qualified sanitary inspectors for the purpose of supervising the quality of the ground upon which their water fell. This was a very important opening for the sanitary inspector.

Presentation to the Ex-Mayor and Mayoress of Bootle.

Dr. J. McMurray, the late mayor of Bootle, was presented by a number of friends with his portrait painted in oils. The picture represents Dr. McMurray attired in academic costume and wearing his chain of office. Mrs. McMurray was at the same time presented with a star of large diamonds and a gold necklace set at intervals with pearls. Alderman Holding, the late Lord Mayor of Liverpool, presided over the proceedings.

Dec. 7th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The New President of the Royal College of Physicians of Edinburgh.

DR. JAMES ANDREW has been elected President of the Royal College of Physicians of Edinburgh for the ensuing year in succession to Sir John Batty Tuke whose term of office has expired. Dr. Andrew holds several of the minor medical appointments in the city and was formerly a physician to the Royal Hospital for Sick Children. He is a graduate of Edinburgh of 1866 and is actively engaged in general family practice.

The Outbreak of Typhus Fever in Edinburgh.

Since the report which appeared in THE LANCET last week seven additional cases have occurred and have been removed to the City Hospital. I regret to have to say that one of the nurses in attendance on the cases contracted fever and died. She had been for many years in the hospital and I understand was much valued and respected on account of her professional attainments, her high character, and her exemplary bearing.

The Princess Louise at the Queen Victoria Jubilee District Nursing Institution.

Her Royal Highness the Princess Louise visited the Edinburgh Branch of this institution last week and presented badges and medals to some of the nurses. Her Royal Highness always takes a warm and practical interest in the working of this institution.

Glasgow University.

Professor Adamson, LL.D., has been appointed by the Senate an assessor in the University Court for four years in succession to Professor Jack, LL.D., whose term of office has expired. The examinerships in chemistry, zoology, materia medica and therapeutics, and clinical medicine and clinical surgery are advertised as vacant.

"The Hospital Story of Glasgow."

A lecture on the above subject was delivered by Dr. Erskine to the Toynbee House Literary Society. The development of the hospital system was traced from the thirteenth century, at which date a hospital is known to have existed in the Polmadie district. An account of the Leper Hospital established in 1350 on the south of the Clyde was also given, and the lecturer referred to the death of Robert the Bruce as probably due to leprosy. Dr. Erskine further described the origin and progress of various existing institutions and concluded his lecture by urging the claims of the scheme of the Lord Provost for the rebuilding of the Royal Infirmary. A number of interesting maps, drawings, and photographs were exhibited.

Glasgow Victoria Infirmary.

The annual meeting of qualified contributors was held on Dec. 1st, Bailie James Dick in the chair. The report dealt with the progress of the hospital and with the more recent acquisition of a convalescent home. The vote of thanks to the medical and surgical staff was acknowledged by Dr. Alexander Napier, who referred to the value of the position of the hospital as an aid in the treatment of disease.

Faculty of Physicians and Surgeons, Glasgow.

The annual dinner of the Faculty was held on the evening of Dec. 2nd, the president, Dr. H. C. Cameron, being in the chair.—Mr. J. M. Cowan, B.A., M.B., B.C. Cantab., having passed the necessary examinations, has been elected a Fellow of the Faculty.—Mr. Ernest Thomson, M.D. Edin., has been appointed an Examiner in Physiology on the Scottish Conjoint Board.

Presentation to Dr. J. B. Russell.

Dr. J. B. Russell has been the recipient of a further testimonial in the shape of a silver tea service and reading desk presented to him by the staffs of the sanitary department and infectious diseases hospitals. In acknowledging the presentation Dr. Russell gave some amusing details of the difficulties encountered in the early days of the sanitary service and showed how gradually public confidence had been gained by the officials of the health department and hospitals.

Resignation of the Medical Health Officer of Paisley.

It has been known for some months that considerable friction has existed between the Paisley local authority and its medical officer and this has now culminated in the resignation of Dr. Donald. The dispute arose in connexion with an outbreak of enteric fever in the early summer which led Dr. Donald to recommend certain improvements in connexion with the distribution of the water-supply so as to prevent any possibility of contamination from the sewers. These recommendations were not adopted by the local authority. More recently a report on the bacteriological examination of the domestic water-supply has been made by Professor Frankland of Birmingham and though he has not detected the presence of the typhoid bacillus the presence of the colon bacillus was demonstrated in the majority of the samples. Professor Frankland denounces the arrangement condemned by Dr. Donald—the direct connexion of the water mains with the sewers by a valve which is opened for flushing purposes—as "an outrage on the principles of modern hygiene." It is in consequence of the unwarrantable opposition to the sanitary reforms which he has long advocated that Dr. Donald has intimated his determination to resign. The local authority has in the meantime postponed consideration of the question.

Poisoning by Ammonia Gas.

In the current number of the *Glasgow Medical Journal* Dr. T. K. Monro and Dr. Workman report two fatal cases following the inhalation of ammonia gas the result of the bursting of a pipe in connexion with a refrigerating apparatus. In each case the post-mortem examination revealed much congestion of the conjunctivæ and deeper tissues of the eyes, evidences of emphysema of the lungs, the bronchi and their sub-divisions being acutely inflamed and lined with a false membrane. The tongue and parts about the fauces presented a raw inflamed appearance, whilst the gullet was free from evidences of irritation, though some patches of congestion were present at the cardiac end of the stomach. The kidneys were acutely congested and the blood was dark and fluid.

St. Andrews University.

The University Court has issued a draft ordinance for (1) the foundation of a Berry chair of anatomy and (2) the foundation of a chair of physiology. The proposal has produced a somewhat angry discussion in the University Council, but in the end the Council decided to support the action of the Court. This decision is in harmony with the determination to provide at St. Andrews University a complete curriculum in the subjects of the first three years of medical study.

Aberdeen Hospitals.

In consequence of his appointment as gynæcologist at the Royal Infirmary Professor Stephenson (Professor of Midwifery in the University of Aberdeen) has resigned his position as surgeon at the Royal Hospital for Sick Children. The directors have accepted the resignation with regret.—The Town Council have made arrangements for giving on Dec. 20th a Christmas treat at the City Hospital (infectious diseases). There are at present about 170 patients in the hospital.

Extension of the Corporation Baths, Aberdeen.

The new wing at the Corporation Baths at the sea beach was opened this week. It contains a hot-room and Russian bath, with sitting- and lounge-room accommodation, sitz bath, and 12 plunge baths and lavatories. It also contains a boiler-room, with 2 steam-boilers and 4 copper water heaters, in connexion with which there is a chimney-stalk of ornamental brick. Like the rest of the buildings the new wing is composed of red compressed Welsh brick with white facings. The whole establishment was designed by Mr. John Rust, city architect, and Mr. John Ogilvie has acted throughout as inspector for the corporation. Altogether there are twenty-eight plunge baths and the total cost, including that of the large underground swimming pond recently opened, has been up to this date about £10,000. An esplanade is being formed out of the city refuse—to extend from the bath-house northward to the mouth of the River Don—and of this about a mile has already been constructed.

Aberdeen Medico-Chirurgical Society.

This society is now to obtain from the Town Council a disposition of the ground in King-street on which the

society's hall, &c., stand. It is curious that although the ground was bought and the price paid in 1817 no title was then or since got. It is whispered that the society are to sell the present premises and move farther west. The late Sir James McGrigor (to whose memory the fine granite obelisk in Marischal College quadrangle was erected) had much to do with the society in its early days.

Dec. 6th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Irish Medical Association.

THE Council of the Irish Medical Association held a meeting at the Royal College of Surgeons in Ireland on Nov. 29th, Sir Thornley Stoker, President of the association, being in the chair. Dr. Smyth of Naas gave an exposition of the grievances connected with the administration of the Irish Poor-law medical service, dividing his statement under the following heads: the mode of appointment, the want of promotion in the service, the issuing of dispensary tickets, the cost of travelling in dispensary districts, leave of absence for vacation, and superannuation. A special committee, which included Sir Thornley Stoker, was formed to consider and prepare a scheme tending towards the improvement of the Poor-law medical service.

Royal College of Surgeons in Ireland.

At the examinations for the Fellowship of the Royal College of Surgeons in Ireland which have just concluded no less than five candidates, including one lady, were admitted as Fellows.

Royal Hospital for Incurables, Dublin.

The Countess Cadogan opened the annual sale of work at the Royal Hospital for Incurables, Donnybrook, Dublin, on Dec. 1st, in the presence of a large number of visitors. Her Excellency was received by the authorities of the hospital and shown a sort of bazaar or fancy mart where a great variety of beautiful and useful articles produced by the patients of the institution were displayed. Her Excellency expressed much admiration for the patients' artistic work, especially the wood carvings.

The National Society for the Prevention of Cruelty to Children, Ireland.

The Registrar-General for Ireland, Dr. Grimshaw, presiding at a meeting in connexion with the National Society for the Prevention of Cruelty to Children, held on Dec. 4th, referred to the large extent to which gambling by means of insurance on the lives of children existed and emphasised the necessity for proper supervision by the authorities of places in which children were kept at nurse.

The Royal Victoria Hospital, Belfast.

At a meeting of the Executive Committee of the Royal Victoria Hospital on Dec. 2nd Mr. W. Henman, F.R.I.B.A., was appointed architect for the new hospital. He is the gentleman who designed the Birmingham Hospital. The balance-sheet presented by the accountants shows that, taking the sums paid or guaranteed to the building and endowment funds (with the outlay up to date), there remain £102,046 6*s.* 1*d.*

The Main Drainage System at Belfast.

A very influential deputation of residents and property owners on the two sides of Belfast Lough appeared before the City Corporation on Dec. 1st to solicit their consideration of some facts concerning the drainage system of Belfast and its deleterious effects upon their comfort, health, and property. They pointed out that before the present main drainage scheme was introduced the shores of the Belfast Lough were comparatively inodorous. Now during the summer months and on to October there is an appalling nauseating stench ever present in the nostrils of those who, unhappily, own property and reside in the vicinity of the Lough, and this stench, the deputation stated, is each year increasing in intensity and extending further down the Lough and is driving visitors and builders from the districts on each side. This disastrous state of affairs the deputation ascribed to the discharge of sewage into Belfast Lough without any attempt at filtration or chemical treatment and to the growth and decomposition by the sun and other factors of a certain class of seaweed which is generated and nourished by this deposit of sewage, and also owing to the tidal currents this sewage cannot be removed. The deputation recommended chemical treatment of the sewage and gave an interesting account of what is being done in this direction in London, Glasgow, Manchester, &c. Finally, the deputation urged the corporation to take immediate steps to abate such an appalling nuisance and preserve the residents of the city and those living upon the shores of the Lough from an inevitable recrudescence of the epidemic of typhoid fever which has so frequently been present in their midst. The Lord Bishop introduced the deputation and Mr. Andrews (chairman of the County Down Railway Company), and Dr. Letts (Professor of Chemistry, Queen's College, Belfast) having spoken the subject was referred to the Improvement and Public Health Committees for consideration.

The Health of Belfast.

At the monthly meeting of the corporation held on Dec. 1st it was reported that between Oct. 16th and Nov. 19th 600 cases of zymotic disease had been notified, 387 of typhoid fever, 98 simple continued fever, 94 scarlet fever, 44 diphtheria, 33 erysipelas, 9 membranous croup, and 2 puerperal fever. There were 118 deaths from zymotic diseases, 75 from phthisis, and 213 from diseases of the respiratory organs. The annual death-rate was 25·9. The number of cases of typhoid fever and the deaths therefrom have materially diminished, and the disease seems to be assuming its normal condition in the city, but, as the medical officer of health states, "it [typhoid fever] is rarely if ever absent from amongst us, and so long as this state of affairs remains a fresh outbreak may at any time occur; every care is being taken as far as possible to prevent this."

The Battle of the Clubs at Cork: the Present Position.

It is now very nearly three years since the battle of the clubs began at Cork and it is interesting to review some of the details of the fight up to date. It will be in the recollection of readers of THE LANCET that there were two grievances which the profession in Cork desired to have rectified. One was the small remuneration paid by the clubs; the other was that owing to the absence of a wage limit numbers of citizens who could well afford to pay ordinary fees joined the clubs and private practice was rapidly approaching the vanishing-point. Accordingly there was a meeting of the profession and it was decided that the medical men holding club appointments should resign and that the seniors of the profession should under no circumstances meet in consultation any medical man who might accept the vacated posts. On this decision being officially communicated to the various clubs nearly all of the latter joined together and determined if possible to defeat the combination of the profession. Advertisements were inserted inviting medical men to take up the appointments and it is regrettable to state that they found 4 members of the profession ready to come to their assistance. One of those had been practising in the city for a very short time and was not known to the majority of the local profession. The 3 others were imported from other districts. Club members filled nearly every post in the local newspaper offices and it is hardly to be wondered at that the editors of those papers espoused the cause of the clubs. The clubs met in solemn conclave and the combination of the medical men was denounced in all the moods and tenses. The newspapers were flooded with correspondence in which vituperation of the medical men was the prevailing note. But the latter calmly pursued the even tenour of their way. The mayor, Alderman Meade, who is also mayor for this year, was anxious to procure a compromise and at his instance a deputation from the profession met a deputation from the clubs. Negotiations proceeded smoothly till the club deputation announced as a *sine quâ non* that the medical men—the errant ones—should be taken into the fold of the local profession. The medical deputation at once replied that such a condition was entirely impossible, but at the urgent request of the mayor they decided on bringing the whole matter under the notice of their professional brethren. Accordingly they did so and the action of the deputation was unanimously and promptly endorsed. The fight was not long in progress when one of the imported men died and, later, another left the city. Meantime two or three of the clubs engaged their former

medical officers on the terms fixed by the profession and the membership of others diminished by one-half, whilst many of the well-to-do members owing to the publicity given to their action became ashamed of their position and called in the assistance of the ordinary practitioners of the city. The two club medical officers met each other in consultation but club patients often realised the inconvenience of being unable to procure the advice of other practitioners and these two gentlemen were repeatedly obliged to submit to the indignity of resigning their cases into the hands of members of the local profession. So things went on till last week, when one of the two sent in his resignation of the clubs and announced his intention of leaving the city. The clubs state that his resignation is entirely due to family reasons, but for some time past it was freely stated that he found his position of isolation from his professional brethren very irksome. He was kept eternally on the move and no doubt time taught him what was the experience of the medical men who had resigned the clubs that club practice in Cork means "much cry and little wool." The clubs now are in a painfully perplexed condition. One of the newspapers which had been always a strenuous supporter of the clubs referring to the resignation says: "Like the case of the 'ten little nigger boys' they have dwindled down to one." But no one man can possibly cater for the medical wants of the clubs of Cork, neither can he hold a consultation with himself. All the newspapers have had leading articles holding out the flag of truce and suggesting that now is the time for compromise. Be it so. But only on the terms that a fair day's work is worth a fair day's wage.

Dec. 6th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Treatment of Tetanus by Intracerebral Injections of Antitetanic Serum.

AT the meeting of the Society of Surgery held on Nov. 15th a discussion was opened upon the treatment of tetanus by intracerebral injections of antitetanic serum, a method of treatment which some two months ago seemed to promise such good results. Statistics brought forward by sundry surgeons, however, gave a most disappointing result. M. François Hue had treated a child, aged eleven years, who developed tetanus after a compound fracture of the forearm. Many injections were made but the child died, although the treatment was commenced immediately on the onset of the tetanic symptoms. M. Quénu had employed the method of MM. Roux and Barrel in 2 cases without success although in 1 case where the tetanic symptoms had only lasted two days the immediate results of the injections were good but the patient succumbed from pneumonia on the third day. M. Lucas Championnière had tried the treatment in 2 cases and had had 2 deaths. In one case of chronic tetanus the patient had recovered after one injection, but it must be remembered that patients do recover from the chronic form of tetanus. One surgeon stated that out of 7 cases he had seen 4 of the patients get well spontaneously. The results obtained by MM. Reclus, Chaput, Richelot, Hartmann, and Nélaton were all equally unsatisfactory. In all cases treated by them with antitetanic serum death supervened. M. Peyrot pointed out the difficulty of differentiating tetanus from cerebro-spinal meningitis and asked whether certain cases of tetanus reported as having been cured were not really cases of meningitis.

Unveiling of the Charcot Monument.

On Sunday morning, Dec. 4th, was unveiled the monument to Charcot on a site in front of the Salpêtrière. There were present M. Leygues (the Minister of Public Instruction), the President of the Academy of Sciences, the Director of the Assistance Publique, the President of the Municipal Council of Paris, the Prefect of the Seine, Dr. Jaccoud (the President of the Academy of Medicine), and Professor Brouardel (the Dean of the Faculty of Medicine and President of the monument committee). Many other scientific notabilities also attended the ceremony as well as the members of Charcot's family, of whom the son, Dr. Jean Charcot, married the granddaughter of Victor Hugo and is at present Professor of Clinical Medicine (*chef de clinique*) at the Faculty. The statue is by Falguières and shows Charcot standing upright with his left hand raised and touching with his right forefinger the head of a patient in front of him. The monument stands just to the left of the great gate leading into the hospital. It is in bronze and on the pedestal, which is perfectly plain, is this simple inscription: "A Charcot. Ses élèves, ses amis.—1898." Orations were delivered by Dr. Brouardel, by the President of the Municipal Council, by Professor Raymond (Charcot's successor at the Salpêtrière), and by Dr. Carnil. Dr. Gombaut, a fellow-worker with Charcot, has received the Legion of Honour.

Medical Qualifications in France and the Position of the Alien Medical Man.

In answer to your request for an explicit account of the position of the foreign medical man or foreign medical student I send you the following statement for the benefit of your readers:—Until quite recently there were two medical degrees in France—the *doctorat en médecine* and the *officiat de santé*. The possession of either of these conferred the right to practise, but there was a difference in the conditions under which this right was exercised. Before a student could begin to study for the *doctorat* he had to have gained the *baccalauréat ès lettres* and the *baccalauréat ès sciences*. After having graduated as a Doctor of Medicine he could practise his profession anywhere in France or in any French colony. For the *officiat de santé* the two *baccalauréats* were unnecessary. The medical studies, however, only differed very slightly, but they were less costly. But the *officier de santé* could only practise in one department, and if he wished to change from one department to another he had to pass another examination. This distinction has been done away with by a regulation passed in November, 1892, and the faculties of medicine no longer receive students for the degree of *officiat de santé*. Those who took this degree prior to 1893 are, however, still allowed to practise. The passing successfully through the course of study for the doctorate of medicine enables the student to take either of two forms of this degree, although there is but one course of study. The student can either take the *diplôme d'état*, giving the right to practise anywhere in France or her colonies, or else the *diplôme d'Université*, which has exactly the same scientific value but does not authorise the holder to practise outside France herself. This last diploma was inaugurated to remove certain abuses of privilege by which foreign students who had finished their studies in France under much easier conditions than natives were accustomed to set up in practice in their adopted country. Formerly it was much easier for a foreigner to practise medicine in France than for a native, for the French students had to break off in their medical studies for three years while going through the prescribed course of military service. The protest to which this state of matters gave rise resulted in a new regulation being made by which foreigners who wished to practise in France were allowed to do so as before under easy conditions, but they were only to receive the *diplôme d'Université*. To gain the *diplôme d'état* they have to submit to the same conditions as natives, that is to say, before commencing their medical studies they must pass for the degree of bachelor (*bachelier d'enseignement secondaire français*), then they have to pass a second examination in physics, chemistry, and natural sciences. This latter examination is a new one and without having passed it no one will in future be able to study medicine. To sum up, a foreigner who wishes to pursue his medical studies in France can choose either of two diplomas. If he desires the *diplôme d'état* giving him the right to practise in France he must undergo the same examinations as a native Frenchman, and before commencing his medical studies must pass the same preliminary examinations, the one for the degree of bachelor (*baccalauréat de l'examen secondaire classique*) and the examination in physics and chemistry. Nothing excuses him from these examinations even though he be the possessor of high degrees in his own country. Not even a doctor in medicine of the first-class English universities can practise in France unless he has passed the above-mentioned examinations. If he wishes to obtain the degree of doctor in medicine merely as an honour without wishing to practise in France he must undergo the same course of study as any other student, but there are certain exceptions. Students of foreign universities who can show testamurs from their university duly translated into French and properly authenticated are excused

the preliminary examinations and sometimes even the first of their medical examinations, according to the point at which they have arrived in their studies in their own country. Those who have already graduated as doctors of medicine are let off still more easily. If they produce a copy of their testamur translated into French and duly authenticated they are excused the examination in anatomy, physiology, and histology. In fact, they commence their studies as a French third year's student. Being excused examinations, however, does not mean being excused fees. The expenses of foreigners and Frenchmen are exactly the same, however many examinations the former may be let off even when they only want an honorary degree. The total sum is 1385 francs, of which 760 francs are accounted for by entrance fee for four years' study, 385 francs by seven examinations at 55 francs each, and 240 francs by fees for a thesis.

Dec. 5th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Italian Precautions against Pestis Bubonica.

ON board the Peninsular and Oriental liner *Caledonia* proceeding from Bombay and timed to touch at Naples two cases of pestis bubonica were reported *en route*. The Neapolitan sanitary authorities on being advised to this effect made every arrangement for meeting the infected ship in blue water so as to arrest her course and have her conducted to the island-station of Asinara under escort of a war-vessel. The *Caledonia*, however, gave Naples a wide berth and on leaving Port Said steered direct to London.

Recrudescence of Psittacosis.

In the spring of last year I drew attention to the epidemic of infective pneumonia at Genoa, an outbreak which numbered 14 victims and which was traced by the Municipal Board of Hygiene to parrots kept as domestic pets. Cases of an identical form of pneumonia ascribed to the same source had also occurred in Florence and the Genoese Town Council, acting on the advice of its medical referee, issued a circular prohibiting the keeping of parrots in private houses. Since then there has been no recurrence of the epidemic in that quarter, but the traffic in these domestic pets—a considerable one between South America and the ports of the Mediterranean—continues and, diverted from Genoa by the municipal veto, has found markets farther inland. In the Julian Venetia, in the province of Udine, there has been a serious outbreak of infective pneumonia and in one house in Beano (commune of Rivolto) three inmates fell victims to the disease and two of them are dead. On investigation it was found that under the same roof two parrots harboured as domestic pets had died shortly before from the pulmonary disorder and that they had formed part of a consignment of these birds lately imported from South America. Dr. Rovere of the Sanitary Office on becoming aware of the facts had an inquiry instituted, and the provincial medical officer in his report fully confirmed the identity of the disease with that previously manifested at Genoa and Florence. Rigorous measures were accordingly enforced to prohibit the keeping of parrots by private individuals in the commune. The whole subject acquires a special significance in view of the growing conviction that mankind runs far more risks to health and life from contact with the lower animals than till lately was suspected. The cow as a source of tuberculous disease has long been notorious, but it was only the other day, so to speak, that the rat in pestis bubonica and the mosquito in malaria were discovered to enter so largely into the etiology of these disorders. And now we have proof positive of the parrot's agency in causing at least one form of infective pneumonia. The moral to be deduced from the above-indicated phenomena points to a still wider and deeper recognition of nature-study in the medical man's equipment—confirms, in fact, the Hippocratic doctrine that the study of disease belongs to natural history and drives it home with a relevance and a cogency of which the Father of Medicine never dreamed.

Dec. 3rd.

Obituary.

WILLIAM THOMAS WYATT, M.A., M.D. OXON.

DR. WILLIAM THOMAS WYATT, who died at Worthing on Nov. 7th, 1898, was the only son of Sir William Henry Wyatt, J.P. and D.L., and was born in London in 1854. He was educated at Lancing and at Exeter College, Oxford, graduated B.A. with first-class honours in Natural Science in 1876 and M.A. in 1880, when he also took the M.B. degree and proceeded to the M.D. in 1883. His graduation thesis, which was published, dealt with the Pathology and Treatment of Diabetes, the malady which prematurely caused his own death. He became a Member of the Royal College of Surgeons of England in 1879. His medical education was received at St. Bartholomew's Hospital, where his record as a student and after graduation speaks for itself. He was scholar in Anatomy and Physiology in 1877, first prizeman in 1878, and Kirkes' gold medalist. He also held the posts of house surgeon and house physician at the hospital, after which he started in general practice and for about twelve years conducted a large good-class private practice in Stoke Newington, to one of the well-known charities in which district, the Invalid Asylum for Women, Stamford-hill, he was consulting surgeon. During this period also he was an active member of the Æsculapian Society and one of its earliest and most able presidents. His death is a cause of sorrow to many of the members of that society and will recall a period of its existence fraught in the memory of the survivors with many pleasant recollections of the good work which Dr. Wyatt did for it. Some years ago the malady from which he suffered rendered it inexpedient for him to continue his life of activity and he left London to reside at Worthing, hoping he might there do some consulting work for which his abilities eminently qualified him. His health, however, continued to deteriorate and frustrated this desire. He has left a son, two daughters, and a widow to whose care he, humanly speaking, owed some prolongation of his all too short life.

WILLIAM FREDERICK CLEVELAND, M.D. ST. AND.

DR. CLEVELAND who died very suddenly at his residence in Maida Vale from fatty degeneration of the heart on Nov. 24th was one of the most prominent practitioners in that part of the metropolis. He was a native of Suffolk, having been born at Lowestoft in 1823. His medical education was received at Guy's Hospital and in 1846 he became qualified as M.R.C.S. Eng. and L.S.A. In 1862 he graduated as M.D. at St. Andrews University, and at the time of his death he was president of the St. Andrews Medical Graduates' Association, his membership dating from the establishment of the association in 1867. He gave much time to the work of the Obstetrical Society of London and the Harveian Society of London, the value of his services being indicated by his election to be vice-president of the former and president of the latter society. Dr. Cleveland filled several offices in connexion with the British Medical Association. In 1890 he was elected president of the Metropolitan Counties Branch; he was also president of the Ethical Section when the Association met in London in 1895 and his address on Medical Ethics delivered on that occasion was published in THE LANCET of August 3rd, 1895. Dr. Cleveland had practised in Maida Vale since about 1852 and was very popular both with his patients and his professional colleagues.

THE VACCINATION ACT, 1898.—At the meeting of the Honiton Board of Guardians, held on Nov. 26th, it was unanimously resolved, on the motion of Mr. H. Ford (the vice-chairman), to invite all other boards of guardians to join in a petition to both Houses of Parliament, the Local Government Board, and the County Council urging that the new Vaccination Act should be reconsidered with a view to being repealed without delay. Mr. H. Marker (the chairman), who seconded the resolution, spoke strongly against the Act and urged the guardians individually to do all they could to get people to have their children vaccinated.

THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION.

WEDNESDAY, NOV. 30TH.

THE Council met this day, Sir WILLIAM TURNER, President, being in the chair, and proceeded with the business of the session.

The Preliminary Examinations.

Dr. PETTIGREW said he wished to make an explanation with regard to what had taken place yesterday during the debate on the preliminary examinations. He had stated that in the Scottish universities double marks or double values were assigned to Latin, Greek, and mathematics in preference over other subjects and the statement had been challenged. Since making the statement he had telegraphed to the secretary of St. Andrews University asking, "Are double marks given in Latin, Greek, and mathematics in the Scottish universities? if so, quote ordinance;" and had received a reply to the effect that Latin, Greek, and mathematics and also English counted double under Ordinance 57, Section 12.

Dr. MCVAIL said it was perfectly true that a higher value was attached to these subjects than to a modern language. That might be right or it might be wrong, but it did not in the least degree affect the question which had been discussed by the Council. The facts, indeed, went to show that the Scottish Universities held a higher class examination than the other bodies.

Alterations in the Council Buildings.

The following report on this subject by the President and Treasurers was received and adopted, viz.:—

The President and Treasurers have to report that satisfactory plans for the addition of another storey to the Oxford-street building have been prepared and are now laid before the Council. They also report that estimates of cost have been obtained from two good firms of contractors — viz., from Messrs. Higgs and Hill, the builders of the Council chamber, for £2349, and from Messrs. Holloway Brothers for £2350, the difference between the two estimates being only £1. Under these circumstances the President and Treasurers suggest that the contract should be given to Messrs. Higgs and Hill. They also advise the Council to accept with thanks the offer of the English Branch Council to advance the capital required at 3 per cent. to the extent of £3000, if required, seeing that the expense of lighting and furnishing the new rooms has likewise to be met. They believe that the suggested alterations of the premises will satisfactorily supply the requirements of the Council. They wish to add that Mr. Rogers, the Council's tenant at 16, Hanover-square, has stated by letter that he will not raise any objection to the raising of the Council's premises, and accordingly the new work will commence at once and be completed by the next session.

Foreign Practitioners.

On the suggestion of the PRESIDENT the consideration of the amended statement prepared by the Executive Committee as to the position of foreign practitioners in the United Kingdom was postponed until the next session of the Council.

Amended Standing Order.

The following amended Standing Order was adopted on the motion of the PRESIDENT, viz.:—

Where it is reported to, or otherwise brought to the attention of, the President or the General Registrar that a registered medical practitioner has been convicted of a felony, misdemeanour, crime, or offence, the matter shall, under the direction of the President, be referred to the Penal Cases Committee for report to the Council, unless in any special instance the President shall deem it desirable to refer the matter to the consideration of a Branch Council, and the Penal Cases Committee or the Branch Council shall, if in their opinion the nature of the conviction renders such a course necessary, not only report the fact of the conviction to the Council, but also direct that the usual notice or summons be sent to the convicted practitioner under Clause 6 of the Standing Orders.

The New Pharmacopœia.

Dr. LEECH presented the following report, viz.:—

The Pharmacopœia Committee beg leave to report that of the first issue of the British Pharmacopœia of 1898, the distribution of which commenced on May 7th last, 18,500 copies were sold before the end of September. As it seemed certain that the remaining stock would be exhausted before the November session of the Council it was thought desirable to print 1500 additional copies, and this opportunity was taken to insert a short list of corrections of manifest errors and misprints. Up to the present time 20,500 copies have been sold, and as only 1000 copies now remain in stock the committee think it desirable that a further issue of 5000 should be ordered. The Pharmacopœia of 1898 seems to have proved acceptable to the medical profession generally and it has likewise been well received by pharmacists. The committee are of opinion that some of the criticisms of the Pharmacopœia should be investigated and reported on by experts and suggest that arrangements should be made for carrying out such investigations and also for accumulating information for the next publication of a Pharmacopœia. They recommend that Dr. Attfield be asked to report on the criticisms passed on the Pharmacopœia and on the progress of pharmacy and pharmaceutical chemistry during the years 1897 and 1898. They recommend also that the pharmaceutical societies be invited by the Council to coöperate in these inquiries and investigations. These societies might be invited by the Council to appoint representatives to confer with members of the Pharmacopœia Committee and the Pharmacopœia Committee should have the power to appoint experts in pharmacy and pharmaceutical chemistry to report upon matters deemed worthy of investigation. The committee further suggest that Dr. Tirard should be requested to act as reporter to the Pharmacopœia Committee on advances in pharmacology and therapeutics bearing on the Pharmacopœia. Some progress has been made with the Indian and Colonial Addendum. It will be remembered that twenty-eight bodies sent in recommendations and suggestions through the Privy Council relative to new remedies or to changes in descriptions and processes desired for recognition in India and the colonies. Many of the suggestions were adopted in the *British Pharmacopœia* of 1898. Others were dealt with in an appendix. The remainder, connected for the most part with recommendations concerning new drugs, were reserved to be dealt with in connexion with an addendum. The drugs recommended for introduction have been carefully examined and described under the direction of the Pharmacopœia Committee and suggestions have been drawn up with regard to preparations which may be required. It is proposed that these descriptions and suggestions, embodied in a report from the committee, shall be forwarded to the Indian and colonial medical authorities, through the Privy Council, and also to other medical and pharmaceutical experts in India and the colonies, with the view of obtaining further suggestions and criticisms prior to the production of the Indian and Colonial Addendum.

Dr. LEECH, in moving the adoption of the report, spoke of the favourable reception accorded to the new Pharmacopœia. In the first six months after its issue as many copies were sold as were sold in twelve months of the Pharmacopœia of 1885. It had been accepted in Canada as well as in the colony of Natal and in Victoria. Indeed, he might say that the new Pharmacopœia had proved specially acceptable in Australia. In the way of dealing with criticisms and accumulating matter for another Pharmacopœia the committee considered that something more should be done than was done after the issue of the 1885 volume; hence the suggestions now made. They proposed that the Pharmaceutical societies should be asked to coöperate from the first and that the Pharmaceutical Society of Ireland as well as that of Great Britain should be asked to give aid. Further they proposed that instead of proceeding independently the societies and the committee should confer together.

Mr. BRUDENELL CARTER seconded the motion.

The report and the suggestions contained in it were adopted by the Council.

Sitting in Camerâ.

The Council sat *in camerâ* for over three hours discussing various legal questions, assisted by Mr. Muir Mackenzie and Mr. Farrer.

The Programme of Business.

A motion proposed by Mr. HORSLEY and seconded by Mr. BROWN that members of the profession visiting the session of the Council should be furnished with a copy of the daily programme of business was negatived.

The Council then adjourned.

THURSDAY, DEC. 1ST.

The final meeting of the session was held to-day, Sir WILLIAM TURNER being in the chair.

Fraudulent Personation.

The PRESIDENT announced that the following motion, moved by Mr. HORSLEY and seconded by Mr. BROWN, was passed yesterday while the Council sat *in camerâ*—viz.: "That the Executive Committee be instructed to report upon means to secure the identification of registered medical and dental practitioners and to prevent fraudulent personation of such practitioners."

The Preliminary Examinations.

The PRESIDENT said that he had received two telegrams with reference to what took place in the Council in connexion with the mode in which the Scottish universities conducted their preliminary examinations. The first was from Professor Butcher of Edinburgh who was one of the Scottish Universities Commissioners and was as follows: "Question of double marks for English, classics, and mathematics has no relation to preliminary examination but only to award of bursaries which are competitive examinations for university distinctions. Yet in these awards modern languages count far more than in English universities." The other telegram

was from Professor Stewart, Clerk of the Senate of the University of Glasgow, and was to this effect, viz.: "Amazed at yesterday's proceedings. Ordinance No. 57 applies to bursaries only and has nothing whatever to do with the joint board or with arts or medical preliminary. In the preliminary examinations there is no such differentiation of marks and each subject has 100 for its maximum. Modern and ancient languages stand on equal footing."

Dr. PETTIGREW said he had made his statement under a misapprehension and desired to withdraw it. The point, however, which he wished to make was that this double marking had the effect of keeping back secondary teaching in Scotland.

Later in the day Dr. PETTIGREW asked leave to make a further explanation. He asked the Council to bear with him because he felt he had not done justice to the subject, the telegrams having taken him by surprise.

The PRESIDENT said that the question could not now be reopened.

Dr. PETTIGREW submitted that what he had to say would come in very well at this stage. This marking no doubt applied only to bursary examinations, but these examinations attracted students to the universities.

The PRESIDENT insisted that the subject must be allowed to drop.

Dr. PETTIGREW resumed his seat, protesting that he ought to be allowed to make an explanation and that it was not fair to suppress it.

The Employment of Unqualified Assistants.

On the motion of Mr. TEALE (chairman) there was received and entered on the minutes the following report from the committee appointed on Nov. 22nd to consider certain communications referring to the employment of unqualified assistants:—

1. The committee have given their careful consideration to a letter from the Lord President of the Privy Council, dated August 4th, 1898, enclosing a complaint from Mr. F. A. Wild, and requesting that it might be dealt with by the Medical Council. Mr. Wild states that he was until recently employed as an unqualified assistant by a registered practitioner and alleges that in consequence of the Council's recent notice he was harshly treated in being dismissed at two days' notice from his employment after a service of sixteen years.

A number of other communications addressed to the Council by persons alleging similar grievances in consequence of the same notice have also been considered by the committee.

These cases appear to be all of the same nature as those dealt with in your committee's report to the Council of last session (Minutes, vol. xxxv., p. 128), and they raise the same points as those which were then replied to under the heading of Question iii. in that report.

In so far as they contain requests that the Council should intervene with the object of procuring the reinstatement or re-employment of such unqualified persons as assistants the answer must obviously be the same as that adopted by the Council last session—namely: "That it is not within the province of the Council to take any steps in this direction."

These and other communications which have come to the notice of the committee make it plain that the evils against which the recent action of the Council was directed were more widespread and deeply rooted than was probably realised either by the profession or the public. The removal of such evils must of necessity involve in some cases the disturbance of old-standing but illegitimate arrangements and a certain amount of temporary difficulty or even hardship to the individuals concerned. But notwithstanding this inevitable consequence the committee are convinced that the paramount duty of the Council in regard to the public in general rendered it urgently necessary that the law should be more strictly enforced.

The committee accordingly recommended that the President be requested to convey to the Lord President of the Privy Council and to the other persons who have addressed the Council on the subject herein dealt with the substance of the foregoing remarks.

2. The committee have had referred to them the following communication from the Gateshead Medical Association:—

Gateshead Medical Association, Cotfield House, Gateshead,
Oct. 19th, 1898.

SIR,—At a meeting on Oct. 4th, 1898, of twenty-two practitioners, members of the above association, which includes every practitioner in this town, the subject of the Council's notice *re* unqualified assistants came up for discussion. So much diversity of opinion was manifested as to the meaning of this notice, and the subject is of such great importance to us, that it was resolved to ask the direct opinion of the Council on the following points.

We would respectfully urge that it will be quite useless to refer us to the notice already mentioned. That document was before us at our meeting, but was of no use in settling the points we now lay before you. We would submit that distinct definitions by the Council of the terms particularly mentioned would not only be of great use to the profession, but are due to us in order that we may carry out the exact intentions of the Council.

1. What is meant by a *bond-fide* medical student?
(*a*) Is *any* man who has registered as a student, but has not yet passed his final examination, a *bond-fide* student? or, if not,
(*b*) How many years must elapse after registration as a student before a man ceases to be a *bond-fide* student?

2. What is exactly meant by proper training and instruction of students when applied to pupilage?
(*a*) How long may a student be a pupil?
(*b*) May he be paid any salary?
(*c*) Would board and lodgings be considered as salary?
(*d*) May a pupil be allowed in any case at all to see a case of sickness in the absence of his principal? or
(*e*) Must he in *all* cases be accompanied by his principal?
(*f*) Can the pupil attend a midwifery case alone? If not, what difference does the Council see between the medical schools which allow students to do so and a medical man in private practice who follows their example as regards his pupil?

These questions, Sir, are not asked in any carping spirit or with any intention of questioning the wisdom of the Council's action. We ask them because we find men honestly anxious to carry out the wishes of the Council with widely differing ideas of the Council's meaning.

One man believes that a pupil must only be allowed to attend a case along with his principal, another thinks that if the principal supervise the case the student may visit alone at the practitioner's discretion. Then, again, we are all at sea as to the exact meaning of "*bond-fide* student."

Trusting that the Council will see its way to a definite pronouncement on these points,

I am, Sir,
On behalf of the Gateshead Medical Association,
Yours obediently,
ALFRED COX, M.B., B.S. Durham.

The President of the General Medical Council.

This communication has reference to a portion of the final clause of the Council's notice of Nov. 2nd, 1897 (Minutes, vol. xxxiv., p. 122), which states that the notice does not apply "so as to restrict the proper training and instruction of *bond-fide* medical students as pupils ..... under the immediate personal supervision of registered medical practitioners."

It appears to the committee highly inexpedient for the Council to issue formal definitions of the terms used in this clause. These terms are obviously employed in their ordinary and natural sense. The students referred to are such as are honestly pursuing their medical studies with a view to obtaining a qualification in the regular course. The primary purpose of the clause is to facilitate the training and instruction of such students during their pupilage in the practice of medicine, surgery, and midwifery, and so to give effect to the recommendations issued by the Council with reference to the five years' course of medical study (Minutes, vol. xxx., p. 82). One of these recommendations is as follows: "The fifth year should be devoted to clinical work at one or more public hospitals or dispensaries, British or foreign, recognised by any of the medical authorities mentioned in Schedule (A) of the Medical Act, 1858, provided that of this year six months may be passed as a pupil to a registered practitioner possessing such opportunities of imparting practical knowledge as shall be satisfactory to the medical authorities."

The duty of a registered practitioner who, in pursuance of this recommendation, undertakes to train and instruct pupils in the practical parts of their profession is obviously two-fold. By his "immediate personal supervision" he must ensure, on the one hand, that his pupils are properly taught, and, on the other, that the welfare of his patients is in no way prejudiced. Supervision which fails to secure both these ends must be regarded as inadequate and the responsibility for such failure must rest with the registered practitioner.

With regard to the training of pupils in practical midwifery the Council has given a sufficient indication of its meaning in its resolution of June 9th, 1896 (Minutes, vol. xxxiii., p. 79). By this resolution it is laid down that every medical student (other than one who has attended the indoor practice of a lying-in hospital) shall, before admission to his final examination, produce a certificate to the following effect:—

"I hereby certify that .....
has personally attended [ ] cases of labour under my supervision, of which [ ] were conducted by him in my presence. Also that he attended under my supervision the women in question during the puerperal period.

"....."
"*Registered Medical Practitioner.*"

The committee are therefore of opinion that enough information has already been given to guide any registered practitioner whose purpose is in good faith to afford proper training to his pupils in connexion with his own practice. To go beyond this, by formulating definitions on such matters as *bona fides* and the nature and extent of the supervision that should be exercised, would serve no good purpose in regard to the interests of sound medical training. On the other hand, definitions of the kind might do harm if they led practitioners to have regard to the letter only and not to the spirit of the Council's declarations. Questions of good faith and the like cannot be settled merely by reference to verbal definitions; and it is impossible so to frame general statements of this nature that they shall be applicable to all cases and circumstances. Each particular case as it comes before the Council must be dealt with on its merits and with due regard to all the evidence adduced.

Mr. TEALE, in moving the adoption of the report, said that the intention of the Council in connexion with this matter was to act justly both to the profession and the public, that it intended these to be laid down rather as general principles than as actual details, and that it would deal with any cases absolutely fairly and on principles of common sense. As he had said before there had been a kind of panic in the profession which had exaggerated the supposed effect of the Council's regulations and he thought if they loyally and carefully studied this report, which reaffirmed perhaps in a little more detail the principles in which the Council wished the profession to practise, no serious harm would come to anyone.

Mr. BRYANT, seconding the report, spoke of it as a remarkably good one and expressed the hope that the profession would accept it in the spirit in which it was offered.

Dr. MACALISTER suggested that in the certificate they should insert within the brackets "not less than 20."

The suggestion was adopted and the report thus amended was agreed to by the Council.

New Colonial Medical Ordinance.

On the motion of Sir JOHN BATTY TUKE there was received and entered on the minutes the following report from the Education Committee on the Medical Ordinance, 1898, of the Colony of Trinidad, viz. :—

The Executive Committee has referred the following letter, and the Medical Ordinance, 1898, of the colony of Trinidad, to the Education Committee for consideration and report:—

Downing-street, Nov. 9th, 1898.

SIR,—With reference to your letter No. 2895 of the 5th of December, 1887, I am directed by Mr. Secretary Chamberlain to transmit to you, for the consideration of the General Council of Medical Education and Registration, a copy of the Medical Ordinance, 1898, of the colony of Trinidad, together with a copy of the Colonial Attorney-General's report thereon, and to inform you that he will be much obliged for any observations which your Council may be good enough to offer upon this ordinance, which is understood to be in accordance with the views of the medical profession in Trinidad.

I am, Sir, your obedient servant,

The Registrar of the General Council of Medical Education and Registration. C. P. LUCAS.

The committee has to report that the ordinance has no bearing on medical education; it provides for the regulation of the practice of medicine and surgery, dentistry and midwifery, the compounding and selling of drugs and medicines. Notwithstanding, in compliance with the request of the Executive Committee the Education Committee submits to the Council the following abstract of the ordinance. It provides—

(*a*) For the establishment of a Medical Board consisting of persons of good character holding "any medical diploma or licence in respect of which he may be entitled to be registered as a medical practitioner in Great Britain or Ireland."

(*b*) For the election of a Council, consisting of a president, vice-president, secretary, and treasurer, and three members of the Medical Board, "to which shall be delegated such of their powers and duties as are by this ordinance vested in the board as to the board may seem fit." It is lawful for the board *(inter alia)* to make and pass by-laws "for the good rule and government of the members, and the affairs of the board, for regulating the manner of applying and using the funds of the board, for regulating the appointment of examiners for the licensing of druggists and midwives," and "for the doing of such further matters and things not inconsistent with the provisions of the ordinance, as may be deemed expedient and necessary for carrying the same into effect. And thereby to appoint such fines, not exceeding in any case £5, as they deem necessary for the prevention and suppression of offences against any such by-laws."

(*c*) For the sale of drugs and poisons.

(*d*) That "any person, not being a member of the board, who shall after the passing of this ordinance practise medicine or surgery or perform any surgical operation, or give any medical opinion or advice, or prescribe any medical or surgical treatment within this island, in respect of which he shall demand or receive any fee or gratuity, or any remuneration, profit, or compensation under pretext of services rendered, loss of time, travelling or other expenses, under any pretext whatever," and that any person who shall wilfully and falsely pretend to be, or use any medical or surgical title, or "assumes any other step [? style], title, designation, or description implying that he is qualified to practise medicine, surgery, or midwifery," shall be liable to forfeit for the first offence £20, and in default to be imprisoned with or without hard labour for any term not exceeding three months, and for a second or subsequent offence £50, or imprisonment for not more than six months. A similar provision is made to protect dentists.

(*e*) That the Council shall have authority to grant licences as druggists or midwives to persons of good character and who shall give proofs, by examination, of study and training that they are fit and proper persons to act as druggists and midwives.

The ordinance comprises much that does not appertain to the medical profession.

The ordinance has been passed by the Governor and Legislative Council of Trinidad and Tobago and has been approved of by the Colonial Attorney-General.

The committee recommends the Council to intimate to the Right Honourable the Secretary of State for the Colonies that it fully approves of the provisions of the ordinance in so far as they apply to the good rule and government of the medical profession and of dentists in the colony of Trinidad and the protection of the public from the dangers of unqualified practice.

Sir JOHN BATTY TUKE moved the adoption of the report and of the recommendation contained in it.

Dr. MACALISTER, in seconding the motion, said that this was probably the most stringent medical ordinance or Act enforced in the empire. He could well imagine that many members of that Council at least would be glad of anything half so strong that could be introduced into the United Kingdom and he congratulated the enlightened administrators of Trinidad that they had seen that the protection of the public urgently called for something of this kind.

Mr. BROWN said he trusted that this ordinance might be made the basis of legislation in this country for the amendment of the Medical Acts.

Sir RICHARD THORNE said he hoped it would be noticed—and especially by the promoters of the Midwives Bill—that according to this ordinance licences were only to be given in the case of midwives to persons of good character and who gave proofs by examination of study and training that they were fit and proper persons to act as midwives. This was a precedent of the very greatest importance.

The motion was adopted by the Council.

Instruction on Vaccination.

Sir JOHN BATTY TUKE moved and Dr. MACALISTER seconded the motion that the following report by the Education Committee on the instruction of students in vaccination under the new Vaccination Act be received and entered on the minutes, viz. :—

The following communication from Mr. Teale has been referred to the Education Committee by the President for consideration and report:—

"38, Cookridge-street, Leeds,
"September 23, 1898.

"Dear Mr. Allen,—Mr. Scattergood, dean of our medical department, has just heard that the vaccination stations are likely to be abolished under the new Vaccination Act, and he asks me what will have to be done for the instruction of students in vaccination as required by the Medical Council.

"Have you any knowledge of this question?

"Yours truly,
"T. PRIDGIN TEALE."

The committee has had the advantage of an interview with Sir Richard Thorne, K.C.B., principal medical officer of the Local Government Board, at which the question involved was considered. The committee was informed that arrangements were under consideration by which the difficulties raised by recent legislation might be obviated and that the Council would be informed of their nature as soon as they were matured.

Sir RICHARD THORNE said the Council was probably aware that a certain number of public vaccinators in this country were chosen as teachers of vaccination and that all the licensing bodies had decided that they would only accept for the purposes of their licences a certificate which was received from one of the teachers whom the Local Government Board had appointed. Formerly they used to receive them from all the general practitioners in the country and then it was so perfectly obvious to the Local Government Board that many of these certificates were not worth the paper they were written upon that the Local Government Board were unable to accept these certificates for the purpose of public appointments. The consequence was that registered medical practitioners had, so to speak, to go to school again to learn vaccination. That had necessitated the appointment of stations where this could be done and under the new Vaccination Act these stations were practically abolished except under one special clause where they might be retained in the presence of an epidemic of small-pox or other exceptional circumstance. These stations were maintained almost exclusively at the cost of the rates and having already been abolished the Government felt it would not be right to require boards of guardians to maintain these stations at their cost simply for the purpose of teaching medical students. The consequence was that some other arrangement would have to be made. He need not tell the Council precisely what had been done, but he might say that Mr. Chaplin was fully aware of the responsibility which had been assumed by the Local Government Board now that they had tacitly assented, as to speak, to all the licensing bodies requiring a certificate from one of their teachers and he felt the need for such arrangements as would maintain these stations in a position in which they would be able to given these certificates. He (Sir Richard Thorne) hoped that this would shortly be finally settled and then he believed some communication would be made to the deans of all the medical schools in the country.

The PRESIDENT said that this difficulty in Leeds had also been experienced in Edinburgh; they wanted to know where the men would get the certificates.

Sir RICHARD THORNE said the Bill did not in the slightest degree alter the circumstances of Edinburgh. In Scotland they had a domiciliary system which had been lauded so much that England had been compelled to adopt it.

The PRESIDENT explained that they had 3 or 4 stations in Edinburgh.

Dr. REID said there was one in Aberdeen.

Dr. GLOVER moved as an amendment:—

That it be a representation of the Medical Council to the examining bodies that the Council is concerned to find that the recent alterations in the Vaccination Acts may involve changes in the administration of the Acts unfavourable to proper instruction in vaccination in England and would ask the special attention of the bodies to the adoption of means for meeting this state of matters and especially to the possibility of recognising under proper conditions and restrictions instruction in vaccination by private practitioners.

He said that they all regretted the wholesale breakdown in the arrangements for public vaccination in this country and looked with anxiety to the result of the recent remarkable

legislation. One chief hope of the country in the matter was in the private influence of the medical profession. Their own regulations recognised that in his fifth year the student might take instruction from a registered practitioner. If there was one thing which a practitioner might be thought capable of teaching it was how to vaccinate an infant. He did not propose to ask the qualifying bodies to recognise the instruction of every practitioner but only the instruction of those practitioners who could satisfy the bodies that they had the means and material of teaching and who undertook to give such instruction carefully. He might say that in Ireland all dispensary officers were public vaccinators and could give certificates of instruction in vaccination which were recognised by the Royal University of Ireland.

The PRESIDENT said that what Dr. Glover proposed was scarcely an amendment but really an independent motion.

Dr. GLOVER said he was quite willing so to regard it.

The Council agreed to receive the report of the committee and enter it on the minutes.

Dr. GLOVER thereafter moved the adoption of his resolution which he insisted was a most reasonable proposition.

Dr. BRUCE seconded the resolution.

Mr. CARTER appealed to Dr. Glover to defer his resolution to the next session of the Council, saying it would be better to make no change until they knew precisely the arrangements proposed by the Local Government Board. If those arrangements were satisfactory and complete, well and good; if they left any opening for additional certification then would be the time for such a resolution.

Mr. BROWN said that Dr. Glover was doing a good thing in calling attention to this matter and he hoped that under the altered conditions the Local Government Board would see its way to recognise this tuition.

The PRESIDENT said that the point raised was a very important one. He recollected that many years ago when he was Dean of the Faculty of Medicine in the University of Edinburgh it had to be considered because they found that their graduates who were not provided with a certificate which was recognised by the Local Government Board had difficulty with regard to obtaining appointments—Poor-law appointments and so on. The matter was brought up and they passed a regulation under which every candidate must produce a certificate from a vaccine department in a hospital, dispensary, or other public institution recognised by the Local Government Board for instruction in vaccination. That was their rule at the present time. They had in Edinburgh three of these recognised vaccine departments, but of course they took certificates from other vaccine departments.

Dr. REID said it was the same in the University of Aberdeen.

Dr. MACALISTER said that Dr. Glover's resolution, if it was to have any effect whatever, ought to be addressed not to the licensing bodies but to the Local Government Board who had the key of the position. If the Board did not choose to recognise vaccination instruction given by a private practitioner the licensing body could say nothing to it. To ask the licensing bodies to intervene in this respect would only be to ask them to stultify themselves. They must approach the Local Government Board.

Dr. MCVAIL moved the previous question and Mr. CARTER seconded.

The PRESIDENT said that after the previous question had been moved there could be no further discussion.

The previous question was carried by a large majority.

Medical Aid Associations.

Dr. GLOVER presented the following report from the Medical Aid Associations Committee, viz.:—

Third Interim Report of the Medical Aid Associations Committee.

The Medical Aid Associations Committee of the Medical Council have to report that they are still in communication with the representatives of the great friendly societies with reference to evils generally admitted or complained of by the medical profession in connexion with medical aid associations. These gentlemen show a desire to ascertain the views of the medical profession and a strong disposition to entertain proposals made by this committee with a view to mitigate the friction now existing. They have represented to the chairman of the committee that at meetings to be held in the earlier part of 1899 they will submit to their constituents a report on this subject. The committee hope with some confidence that at the next meeting of the General Medical Council they may be able to give a favourable account of their negotiations with these representatives of the friendly societies.

The committee are constantly reminded by correspondents of the evils of existing systems by which medical men are placed at a disadvantage by huge institutions under one or two medical officers; sometimes by insurance and other companies purely commercial in their nature and objects, which destroy the respectability of medical practice by methods of touting and advertisement and by the indiscriminate admission to "benefit" of all classes at a rate of remuneration inconsistent with the welfare of the patients and the self-respect of the medical officers.

Dr. GLOVER, in moving that the report be received and entered on the minutes, said that perhaps members might think the committee were rather slow in bringing matters to a head, but it had been explained to them that at the beginning of the new year the meetings of the friendly societies would be held when the representatives of these societies would consult their colleagues as to the proposals made.

Dr. CHURCH seconded the motion.

Mr. HORSLEY said he could not help thinking that they were inflicting hardship upon the profession by not making up their minds upon this subject. He did not think they had any right to go on from year to year merely issuing interim reports which had no practical value. In this matter they were not concerned with the good friendly societies but with the bad medical aid associations, and so far as he gathered the latter did not attend the conference which had been held. He wished to advert to the condition of this question in Coventry. He was informed that a letter had been written to the Council and it obviously came under this heading and what he would propose in regard to the Coventry matter was that the Medical Aid Associations Committee be invited to take up this communication and report upon it during the next session of the Council.

Dr. BRUCE said that Mr. Horsley had scarcely done justice to the committee. They had fully considered this memorial and they had resolved to make a report upon it at the proper time. Mr. Horsley appeared also to forget the amount of information the committee gave upon a previous occasion. The committee spent days and days over this question of the disreputable societies and he would point out that if they came to terms with the main and extensive societies the others would be, so to speak, nowhere. If the large friendly societies dealt with the committee in a proper way they all, the other medical aid associations, would have to follow suit. He would appeal to the Council that they should not at this particular moment intervene when the committee saw some hope of the question being settled, and settled, he might say, greatly to the benefit of the profession at large.

The PRESIDENT said he might tell Mr. Horsley that the paper he referred to had already been put into the hands of the chairman of the committee.

Dr. GLOVER said that not only had it been put into his hands, but it had been carefully considered by the committee. He would add that he considered it was of enormous consequence that they should come to an understanding with the friendly societies of England. They were a class by themselves, they represented people whom that Council ought to consider, and he was bound to admit that the leaders of these friendly societies had shown a great desire to understand the real needs of the case.

The PRESIDENT said that he was present at the conference and could confirm what Dr. Glover had said.

The motion was then agreed to.

Proposal for a Sinking Fund.

The next business on the programme was the receipt of a report from the Finance Committee on the establishment of a sinking fund.

Mr. BROWN said that as this was a matter on which there was much difference of opinion it should be delayed till next session.

The PRESIDENT thought that Mr. Bryant, one of the Treasurers of the Council, should be heard on the subject.

Mr. BRYANT said that the proposal in question was brought before the Council last year and was referred to the several Branch Councils for consideration and report. The report he had to present included the original suggestions and the resolutions of each of the three Branch Councils. The report of the English Branch Council was as follows:—

Moved by Mr. BRYANT, seconded by Mr. CARTER:—

"That a sinking fund be established by the General Council to repay to the English Branch Council the sum of £25,000 advanced to the General Council for the purchase of the present freehold and the erection of the building, the annual payment being £215 12s. 6d., and the capital sum returned £25,000 at the end of fifty years."

Amendment moved by Dr. MACALISTER, seconded by Mr. BROWN:—

"That, whilst the English Branch Council has no desire to have its mortgage on the building repaid, it raises no objection to the General

Council forming a sinking fund for the purpose of repaying it at the end of a term of years."

The amendment was carried, and being put as a substantive motion was also carried.

The report of the Scottish Branch Council was as follows:—

The branch agreed unanimously to support the formation of a sinking fund for the object in question, but to suspend judgment as to further details of the plan, as it was apparent that these still required some consideration.

Sir WILLIAM GAIRDNER: I find that in this report there is a mistake of mine. The Branch Council was not unanimous, as Dr. BRUCE spoke against the proposal.

Mr. BRYANT: Strike out the word "unanimously."

This was done.

Mr. BRYANT said that the report of the Irish Branch Council was as follows:—

The Irish Branch Council have considered the proposal to establish a sinking fund to the amount of £215 12s. 6d. annually for fifty years for the purpose of paying off the debt due to the English Branch, and they are of opinion that such a proceeding is not needful and would, moreover, seriously embarrass the Irish Branch, on whose limited income the additional payment would prove most oppressive.

Proceeding, Mr. BRYANT said that the suggestion he had made was that a sum should be invested with an insurance company so as to carry out the scheme for the establishment of a sinking fund. It had been pointed out that a lump sum of money might be put into the Bank of England or they might make an annual payment to an insurance company. On inquiry at the Bank of England he was advised that it would probably be better to arrange with some one of the first-class insurance companies both on the ground of cheapness and simplicity. He mentioned in the notice of motion he had given only the Alliance Insurance Company. That was because it was a company that did business in this line and was safe and cheaper than any other of the companies from which he had information. Since this question came up he had put it to himself whether another method might not be possible.

Dr. BRUCE: Does Mr. Bryant adhere to the motion of which he has given notice? or does he propose to make another motion?

Mr. BRYANT: I stand by what is printed but I am going to present an alternative.

The PRESIDENT: One moment. The point is this: your report should be received and entered on the minutes. That should be done first.

Mr. BRYANT: Very good, then I move.

Sir DYCE DUCKWORTH seconded and the motion was agreed to.

Mr. BRYANT, proceeding, said if they established a sinking fund it would work out in this way. If they put the fund into the hands of the Government they would receive interest at the rate of only 2½ per cent. per annum and in fifty years that would come to only £20,958. That was less by £4000 than they would get from the Alliance Insurance Company for the same annual payments, because for £215 the Alliance Insurance Company at the end of 50 years would give them £25,000. He had examined the terms which they might get from the Rock Insurance Company and he found that they were not so favourable. There was a suggestion that the insurance might be effected by the payment of a lump sum. If they accepted that suggestion the English Branch Council would be prepared to advance the necessary money, £5700, and would ask on it interest at the rate of only 3 per cent., which meant that the Council would require to pay annually only £171 or £44 a year less than if they were to pay over the sum in fifty instalments of £215 each. He conceived that this annual payment of £171 would not be felt by the Council, and if at any time in the future the Council felt pinched they could get the money back from the insurance company at the rate of 3 per cent. simple interest. He moved that the president and treasurer should be authorised to start a sinking fund to repay the English Branch Council the sum of £25,000 at the end of fifty years, either by the payment of a lump sum or by annual payments.

Sir DYCE DUCKWORTH seconded the motion.

Mr. BROWN earnestly appealed to Mr. Bryant to postpone this question till May next. He maintained that there was no hurry. The scheme now brought before the Council was something novel and he must remind them that there was a great deal of difference in regard to this matter in all the Branch Councils.

Mr. TOMES suggested to Mr. Bryant that he might propose a motion establishing the principle and give the Council an opportunity of examining the details.

Mr. BRYANT thereupon proposed the establishment of a sinking fund by one payment of £5700.

Sir CHRISTOPHER NIXON opposed altogether the idea of the establishment of a sinking fund for the reason given in the report of the Irish Branch Council. In the forty years the Council had been in existence the English Branch Council had been able to accumulate no less than £40,000, while the Irish Branch Council had not a sixpence. That the latter was so poor did not much matter to the Council itself because the General Council was bound to provide for the expenses of the Irish Council. Perhaps it was a pity that the original arrangements should have permitted this, and if there was to be any legislation which would alter the conditions of the Medical Act, one thing he should ask for would be that there should be a common fund.

Dr. ATTHILL said that the General Medical Council had on loan from the English Branch Council between £20,000 and £30,000 at the rate of 2½ per cent. and they were no losers. Why they should wish to get this money repaid seemed to him to be an extraordinary thing. Apart from that, supposing they established the suggested sinking fund, what was the benefit to be to the Council in the future? Fifty years hence what would they do? If they got this money returned to them they would need to invest it. So far as the Irish Council was concerned he, as a member of it, would oppose this motion on business grounds. In 1895 the Irish Council had some £800 or £900 to the good, but in 1896 they entered upon the down grade, and if they were required to pay as much to the General Council as they had been called upon to do during the last few years he believed that next year the Irish Council would become bankrupt unless they got back some of the money derived from the sale of the new edition of the Pharmacopœia.

Mr. BROWN, rising again, said that the question was not in such a condition as to enable the Council to come to a decision that day and he therefore moved that the matter should be referred back to the Branch Councils for consideration and report.

Dr. BRUCE seconded this proposal.

Dr. MACVAIL said that the Scottish Branch Council approved of a scheme which would enable the buildings of the Council to become the property of the General Council itself and not of any Branch Council. He hoped that the Council would now approve of the principle of a sinking fund.

Dr. HERON WATSON felt sure that the Council would agree in general terms to the principle of a sinking fund, but it was evident that the schemes which had been mentioned had not been fully considered, and it seemed to him that before proceeding further they should have an actuarial report.

Dr. GLOVER agreed. They should get the report of an expert who was altogether independent of insurance offices.

Mr. BRYANT said that he had no objection to take the matter back in order to obtain an expert's report.

After some further discussion it was agreed, on the motion of Mr. BRYANT, seconded by Sir DYCE DUCKWORTH:—

That the Council approve of the proposal to form a sinking fund to repay the English Branch Council at the end of a term of years the sum of £25,000, and that the Finance Committee be authorised to obtain from an expert a report, to be laid before the Council, upon the methods of carrying the proposal into effect.

Inspector of Examinations.

Sir DYCE DUCKWORTH presented a report from the Executive Committee in regard to the resignation of Dr. Sidney Coupland, the inspector of examinations, and moved that Sir George Duffey be appointed in his stead.

Mr. BRYANT seconded.

Dr. BRUCE moved, as an amendment, that the question of the appointment of an examiner be referred back to the Executive Committee with power to make an appointment. Sir George Duffey was a friend of his, but he thought that the appointment it was proposed to give him would not be a wise one. Sir George Duffey had been an examiner under the old conditions of the Dublin Apothecaries' Company and it might be well that he should not be appointed under the arrangement which now existed.

Dr. REID seconded the amendment.

Dr. ATTHILL agreed that it might be as well they should get a new man. Sir George Duffey was certainly an able

man but he had not sought this appointment and he did not know that he wanted it.

Dr. MACALISTER pointed out that they all had the fullest confidence in Sir George Duffey and even though the amendment were carried that must not be taken as casting any reflection whatever upon that gentleman.

Mr. TICHBORNE did not think the appointment of Sir George Duffey would be acceptable to the Dublin Apothecaries' Hall, because he was associated with a body which was competing with the Hall. He questioned very much if Sir George Duffey would accept the appointment if he got the opportunity of taking it up.

The amendment was agreed to, the PRESIDENT pointing out that the Executive Committee at the end of the Council's sitting could meet for the purpose of making an appointment. Thereafter the following resolutions were adopted—namely:—

That the inspector be appointed to inspect all the examinations of the Apothecaries' Hall, Dublin.

That the inspector also be appointed to inspect the Conjoint Examinations of the Royal College of Surgeons in Ireland and the Apothecaries' Hall, Dublin.

That the remuneration assigned to him be on the same scale as that to Dr. Coupland.

That the Council do authorise the President to nominate one or more members of the Council to act as visitors along with the inspector.

Irish Examinations.

Mr. TICHBORNE proposed:—

That the examinations of the Conjoint Board of the Royal College of Physicians and the Royal College of Surgeons, Ireland, be reported upon for the next year by the inspector and visitor appointed by the Medical Council.

He stated that the reason why he proposed this motion was that the examinations of the Conjoint Board were not only not up to the standard of the Conjoint Board for the Royal College of Surgeons in Ireland and the Apothecaries' Hall of Dublin, but were below the standard required by the Council.

Dr. BRUCE seconded the motion.

Sir CHRISTOPHER NIXON proposed as an amendment:—

That the examinations of the Royal College of Physicians and the Royal College of Surgeons of Ireland be reported upon only at the same time as the report of the examinations of the universities and licensing corporations in general are presented to the Council.

He supposed this motion by the representative of the Dublin Apothecaries' Hall had been inspired simply out of spite because of the frequency with which the inefficiency of the Hall had been brought before the notice of the Council. He thought the hands of the Dublin Hall authorities were at present full enough with their own affairs instead of interfering with those of other bodies. There was no evidence before the Council that the conjoint examination of the Irish Royal Colleges of Physicians and Surgeons was not up to the standard required by the Council and consequently it would be an ungracious act on the part of the Council to interfere with these examinations.

Sir WILLIAM THOMSON, who seconded the amendment, agreed that no case had been made out to justify the motion.

Dr. MACALISTER pointed out that if the motion were carried they would be proceeding contrary to the Standing Orders.

On a show of hands 17 voted for the amendment and 2 against.

The PRESIDENT thereupon proposed to put the amendment as a substantive motion.

Dr. MACALISTER said he could not vote for it. There was no need to adopt Sir Christopher Nixon's proposal and they should take care to keep in their own hands, unfettered by any such proposal, the times at which they should examine any of the licensing bodies.

On a division only 7 voted for the substantive motion, which accordingly was rejected by a majority.

Alleged Recognition of Grammar School Studies by the London Colleges.

Sir PHILIP SMYLY called attention to the following letter forwarded by the Royal College of Surgeons in Ireland in regard to a regulation of the Conjoint Board of the Royal Colleges of Physicians of London and Surgeons of England, which accepts time spent in institutes recognised by it for instruction in physics, chemistry, practical chemistry, and biology as the first of the five years of professional study:—

SIR,—The attention of the President and Council of this College has been called to the terms of a regulation promulgated by the Conjoint Examination Board of the Royal Colleges of Physicians and Surgeons of England on the 14th of July, 1898, which declares that "the first of the five years of professional study may be spent at an institute recognised by the board for instruction in chemistry, physics, and practical chemistry and biology, or six months may be spent in attendance at a similar institution in receiving instruction in chemistry, physics, and practical chemistry only." Four complete years of professional study must be attended at a recognised medical school and hospital after passing parts i. and iii. of the first professional examination.

It is furthermore observed that, as appears from the most recent list of "institutions" recognised by the London Conjoint Board, 54 non-medical schools are accepted as centres of study in these subjects, of which 35 are grammar schools and the remainder are departments of local technical schools, the teaching capacity of which may be open to question.

This College submits that the above quoted regulation of the London Conjoint Board, which declares that four years of medical study shall suffice for a grammar school boy or a student of a technical school, while five years are required from a student of a medical school, is at variance with the recommendation of the General Medical Council of June 9th, 1858 (Minutes, vol. xxxi., p. 163), which explicitly declares that "such course or courses shall not be held to constitute any part of the five years' course of professional study." When the General Medical Council adopted the requirement it declared that such course should only qualify for part of the first year's examination, but should not under any circumstances exempt the student from any part of his five years' course of professional study; yet the London Conjoint Board has granted exemption from the first year in respect of the courses and has thus reduced the necessary period in the cases of these students to four years.

This College observes that, so far as the General Medical Council has recognised studies in non-medical schools, it has done so under guarantees for the *bonâ fides* of the instructions therein and has reserved to itself by implication the power to withhold recognition. In 1894 (Minutes of General Medical Council, p. 162) it resolved to require a list of institutions to be submitted by the licensing body which proposed to recognise them, and also required that a statement should be appended by such body "that after due inspection it is satisfied that the institution so recognised possesses sufficient laboratory accommodation and appliances for the efficient teaching of the required subjects." This College is unable to discover from the official records of the General Medical Council that the London Colleges have ever presented any statement as to the requisite inspection of such schools or as to their satisfaction with the teaching arrangements, or that if such statement were presented it was ever laid before the Council or received their approval. Notwithstanding this, it is observed that certain of these grammar schools and technical schools have been inscribed in the Students' Register as "institutions," the studies in which are accepted as the "commencement of medical study," and this College is desirous of being informed of the grounds on which such acceptance has been accorded, inasmuch as no permission is to be found in the records of the Council.

I am directed by the President and Council of this College to submit to the General Medical Council their most earnest protest against the recognition of grammar schools or other unguaranteed "institutions" as centres whose teaching exempts students from their first year of professional study, and to point out that their protest is supported by the emphatic judgment of the Education Committee of the General Medical Council (see Minutes, vol. xxx., Appendix 16, pages 8 *et seq.*). That judgment declares that the "interpretation of the phrase 'teaching institution' so as to include ordinary public schools was not contemplated by the Council," and was, in fact, rejected by the Council, and that "the intention of the Council was that the first years should, in general, be passed, if not at a university or other school of medicine, at a recognised school of science or technical college where the student could be brought under influences which are not operative in the school-room.

Under these circumstances the President and the Council of this College submit the requests:

1. That no centre of teaching shall be in future recognised as qualified to certify the "commencement of medical study" save a university or a recognised school of medicine, or a school of science in respect of which evidence of "inspection" and of "accommodation and appliances for the efficient teaching of the required subject" shall have been presented to the Council.

2. That all centres of teaching not included in this category be removed from the list in the Students' Register.

3. That except in the case of institutions thus indicated all students shall be required to fulfil the complete course of five years of professional study, exclusive of all studies pursued before the legitimate commencement of medical study. Or also

4. That for all students whomsoever the requisite course shall be in future reduced to four years.

I am, dear Sir, yours obediently,
JOHN BARTON, F.R.C.S.,
Secretary of Council, Royal College of Surgeons in Ireland.
The Registrar of the General Medical Council, Nov. 17th, 1898.

He (Sir Philip Smyly) had put on the programme notice to move the four requests of his College as four separate and distinct motions and Sir William Thomson proposed to second him. The Irish College of Surgeons had prepared their letter very carefully and they did not wish it to be taken as an attack upon either the English Conjoint Board or the English Royal Colleges. The Council had power to express an opinion and issue a recommendation and he could promise on the part of his College that any recommendation of theirs would be received with all due loyalty and respect.

The letter, which was read at length, was entered on the minutes. Thereupon

Sir PHILIP SMYLY proposed the first of the four resolutions standing in his name.

Sir WILLIAM THOMSON, in seconding the motion, contended that while the Council's recommendation was that there should be a five years' course of study in professional subjects subsequently to the passing of the preliminary

examination the regulation of the English Conjoint Board reduced the period of professional study to four years. The English Conjoint Board had therefore departed from the Council's policy of a five years' *bona fide* medical curriculum, dating from registration in the Students' Register. He did not question the capability of grammar schools to give general education, but he questioned the power and capacity of grammar schools to give the first year's medical instruction, and it was impossible that they could take even from South Kensington an opinion that such and such a school was suitable to teach the subjects prescribed for the first year of medical study.

Mr. BRYANT admitted that the Royal College of Surgeons of England had in a measure, but only to a slight degree, deviated from the recommendations of the General Medical Council, but they believed that the deviation was in the direction of improvement rather than the reverse. Members knew that the Council for many years had sanctioned outside institutions as teaching institutions for the medical preliminary subjects. The College of Surgeons had now done the same and the success which had attended their action had not been a bad one, for statistics showed that of the successful candidates 67 per cent. came from the outside institutions, as compared with 61 per cent. from the medical schools. Therefore the Conjoint Board scheme had not been to the detriment of the medical schools. It had been the experience of all—teachers and examiners alike—that the preliminary subjects often ran over into the second year, sometimes into the third. So that they said to those students who had not been able to qualify in parts i. and iii., if their study required to extend into the second year, "You have still to pass full four years of professional work before you are admitted to the profession of medicine and surgery." Although his College had not followed quite in the lines which the General Medical Council had recommended they had recognised the principle involved in the recommendation. He was willing to admit that perhaps they had been too liberal in recognising the institutions recognised by South Kensington. At the same time he had to say that during the past year or two they had visited those institutions of which they had any doubt. They had always had good visitors to inspect these places and where there had been the shadow of a doubt the institutions had not been accepted. He moved that the communication from the Irish College of Surgeons and the motions based thereupon standing in the names of Sir Philip Smyly and Sir William Thomson should be referred to the Education Committee for consideration and report.

Sir CHRISTOPHER NIXON, in seconding this proposal, congratulated Mr. Bryant on the frank acknowledgment he had made on the part of the College of Surgeons that they had deviated from the recommendations of the General Council. The body he represented—the Royal University of Ireland—received intimation of the English Conjoint Board's action with consternation, and it was felt that the English Board had by that action rather stolen a march upon the universities. If the Council allowed all the licensing bodies to recognise the grammar schools of the country they were putting the universities to a disadvantage. There was no doubt that advantage accrued from having medical students trained in medical schools which had always been inspected and contained proper appliances for the necessary tuition.

Sir DYCE DUCKWORTH said that the English Conjoint Board was very well satisfied with the results attained under their new regulation. It had been the experience of teachers and examiners that a large proportion of the failures in examinations resulted from the mixing up of tuition in general and professional subjects. The new arrangement enabled an ordinary intelligent student to begin his professional studies during school life, and the Royal College of Physicians of London saw no harm in that. The University of London was perfectly satisfied with the arrangement. The Scottish universities, he believed, had a similar arrangement.

The PRESIDENT said that that was a mistake. A candidate for the medical profession must study in the university or in a recognised medical school. Repeatedly application had been made to the University of Edinburgh for the recognition of institutions in the rank of grammar schools, but they had always been declined. It was as well to mention that fact, for in the debate in the Royal College of Physicians of London the Scottish universities had been placed in an entirely wrong position by one of the speakers and he was desirous to correct the erroneous impression.

Sir DYCE DUCKWORTH remarked that some of the technical schools were really equivalent only to grammar schools and it came to be a question of the relative value of the teaching. It was quite certain that some grammar schools and some other institutions recognised by the Conjoint Board were distinctly better teaching institutions than many of the medical schools, the teachers and the standard of the teaching being distinctly higher in these outside institutions than in the medical schools. Therefore it could not be supposed that students trained in these outside institutions were losing ground. The Conjoint Board allowed no student to pass into the profession who had not undergone five years of professional study. The arrangement which they had made they considered was the best way of meeting requirements.

Mr. BROWN said that as a Direct Representative for England he owed a debt of gratitude to the Irish members for calling attention to this matter. They had been told by Sir Dyce Duckworth that many grammar schools and other teaching institutions recognised by the Conjoint Board could give a professional education better than many of the medical schools. That was an important statement which he hoped would receive attention in the proper quarter. He did not dispute that it was so but there were members of this Council who thought that the recognition of grammar schools by the Conjoint Board was an attempt to get behind the regulations of the General Medical Council. To some extent it had been successful, for it supplied not what the London medical schools supplied but what the Irish and Scotch schools did supply. He objected to the acknowledgment of grammar schools in the neighbourhood of London and he hoped they would be able to thrash the whole subject out next session. The grievance was by no means a bogey one but a real grievance.

Dr. BENNETT held that the regulation in question really instituted a four instead of a five years' professional curriculum.

Dr. HERON WATSON contended that the action questioned was in accordance with the action of the Royal College of Surgeons of England with reference to dental education. It evaded the spirit if not the letter of the General Medical Council's recommendation. Their answer in this instance was precisely of the same character and bore the same interpretation as on dental education. The Council had better keep their eyes open as to what the Royal College of Surgeons of England was inclined to do.

Sir JOHN BATTY TUKE, as chairman of the Education Committee, said that he and he had no doubt his colleagues also on the committee would undertake with pleasure the duty of reporting on the subject if the Council cared to pass the amendment, but he must tell them that he could not see that the committee could do other than reaffirm their decision that the curriculum should be a full five years' one.

The amendment proposed by Mr. BRYANT was then carried by a large majority and became the finding of the Council.

Inspection of Documents.

Sir RICHARD THORNE moved:—

That in view of the fact that the operation of the Standing Orders as to the inspection of documents passed by the Council on May 31st, 1898, is not altogether satisfactory the Executive Committee be instructed to consider and report to the Council at the next session: What arrangements can be best made to facilitate that examination by members of the Council of all documents which are the property of the Council, subject to leave being obtained for such examination, and to the legal rights of the Council in regard to such documents, as also to their proper safeguard.

Dr. MACALISTER seconded the motion.

Mr. HORSLEY moved to leave out the words providing that inspection should be subject to leave being obtained. He said he had legal advice that it was not necessary to obtain leave, the rights of all members of the Council in respect to Council documents being equal.

Mr. TOMES seconded Mr. Horsley's proposal.

Dr. MACALISTER said that the Executive Committee had legal advice that leave was necessary and he could not accept the motion unless the words objected to were retained.

On a division the amendment was rejected by 13 votes to 9 and Sir Richard Thorne's motion was adopted by 16 votes to 2.

Police Fines under Medical Acts.

On the proposal of Dr. GLOVER, seconded by Mr. HORSLEY, the Council adopted the following interim report from the Committee on Fines under the Medical Acts:—

The committee have to report that they have endeavoured unsuccessfully to obtain an interview with the Commissioner of Police of the

Metropolis who suggests that the committee should communicate directly with the Secretary of State on the subject. The committee will be glad to have from the Council a direction to take this action as opportunity may offer before the meeting in May.

Direct Representation.

The next business on the programme was the following notice standing in the name of Mr. Brown:—

That, in the opinion of the Council, the time has come when it is expedient to confer on the registered medical practitioners resident in England the power of returning an additional member to the General Medical Council as provided for in the Medical Act of 1886.

On this being reached Mr. BROWN explained that in the last twenty minutes of the last day of the session he could not do justice to the subject and therefore wished for leave to withdraw the proposal in the meantime.

Leave was granted.

Unauthorised Medical Examinations.

Dr. MACALISTER called attention to memorials on the subject of illegal certificates of proficiency in departments of medicine, surgery, or midwifery received (1) from the Corporate and Medical Reform Association, Limited, and (2) from 237 registered practitioners and laymen.

Mr. BROWN, in connexion with this subject, proposed:—

That a special committee be appointed to consider and report at the next session of the Council cases of alleged infringement of the Medical Acts by persons who profess to examine candidates in medicine, surgery, or allied subjects and to grant certificates or diplomas testifying as to proficiency in any branch of medical or surgical science.

He stated that they had evidence in the memorials just referred to that there were persons who professed to examine others for proficiency with reference to diseases of the eye. This, he contended, was the thin edge of the wedge of infringement of the Medical Acts, and he thought it was indeed very desirable that any examination not authorised by the Acts of Parliament which purported to be an examination in any branch of surgery should be at once taken notice of with a view to its suppression. They had had experience in more than one case of the danger of allowing things to slide and he hoped the Council would not object to take action on these memorials in the way which he proposed.

Mr. HORSLEY seconded the motion, contending that the question involved was even more important than was represented in the memorials.

Dr. MACALISTER proposed that instead of assenting to Mr. Brown's motion the Council should refer the memorials to the Executive Committee.

After some conversation the motion of Dr. MacAlister was agreed to by a majority.

University Degrees Bill.

Dr. MACALISTER put before the Council a resolution passed by the Incorporated Medical Practitioners' Association in regard to the University Degrees Bill. The Bill, he said, was before Parliament last session and it proposed that anyone who used a degree not obtained in the United Kingdom should put after it the source of the degree. The resolution was as follows, viz.:—

The Central Council of the Incorporated Medical Practitioners' Association desires to draw the attention of the General Medical Council to the Universities Degrees Bill and trusts that no support will be given to the measure, which in the opinion of the Council of the Incorporated Medical Practitioners' Association if it becomes law will only tend to be a source of annoyance to registered medical practitioners and is quite useless to prevent the practising of quacks and medical impostors generally. It is further of opinion that if foreign graduates be compelled when using their academic letters to state the university conferring them the same duty ought to be put on English graduates, seeing that many English practitioners at the present time have their foreign degrees registered in the same way as the holders of English degrees. The council, however, is strongly of opinion that with regard to this purely honorary matter it would be better to leave matters as they are and that legislation on the matter is uncalled for.

He (Dr. MACALISTER) said that as the Council has not proposed to support the University Degrees Bill he simply proposed that they pass to the next item on the programme.

Mr. HORSLEY: I intend next session to ask the Council to support this Bill, because I think it is a most important one.

The subject dropped.

Claiming Medical Status.

Mr. BROWN moved:—

That in all cases where a person whose name is not on the Medical or Dentists' Register is charged with an offence before a public tribunal in England and Wales, and it is reported that the accused claims to be a medical practitioner or dentist, it be an instruction to the General Registrar, or in the case of Scotland and Ireland the Branch Registrars, to write to the presiding official of that tribunal stating that the accused person is not a registered medical practitioner or dentist.

The proposal was seconded by Mr. HORSLEY, but as it was objected that in its present shape it was unworkable Mr. BROWN consented to withdraw it in order to bring it up in an amended form next session.

Dental Business.

Mr. TOMES presented a report from the Dental Committee in regard to certain cases referred to it under Section 15 of the Dentists Act (1878) to ascertain the facts. There were three cases in all reported on. In the first case the committee reported that it had not been proved to the satisfaction of the committee that the practitioner did the acts complained of. In the second case it was explained that the practitioner had given up dentistry altogether and the Council resolved to take no further action. In the third case, in which the practitioner concerned was complained of for giving a certificate of death, the Council decided to adjourn the further consideration of the case until next session.

Mr. TOMES also presented a report by a special committee consisting of the members of the Dental Committee which contained the following recommendations, viz.:—

(*a*) In regard to a communication from the British Dental Association as to the issue of a notice to dentists in regard to the employment of unqualified assistants they adopted the following resolution:

That the members of the Dental Committee recommend the General Council to reissue to all persons on the Dentists Register the notice of Nov. 24th, 1892, in regard to the practice of covering unqualified persons (Minutes, vol. xxix., p. 142).

(*b*) In regard to a communication from the Dundee and District Branch of the British Medical Association as to the administration of anæsthetics by registered medical practitioners for unregistered dental practitioners, a practice which the Executive Committee has already characterised as in its opinion reprehensible, they adopted the following resolution:—

"That the members of the Dental Committee agree with the opinion expressed by the Executive Committee that the practice referred to in Dr. Buist's letter is most reprehensible, and recommend that if a charge of covering in connexion with such administration of anæsthetics were brought before the General Council it should be entertained and investigated."

In moving the adoption of recommendation (*a*) Mr. TOMES explained that the warning issued in 1892 was very similar to the covering notice issued to those on the Medical Register and said that the issue in 1892 undoubtedly did some good in the way of frightening people out of the employment of unqualified persons.

The recommendation having been seconded by Mr. CARTER was adopted by the Council.

Mr. TOMES moved the adoption of the second recommendation (*b*). He explained that the Dundee and District Branch of the British Medical Association passed a resolution to the effect that action ought to be taken in the matter of registered medical men favouring unregistered practitioners by administering anæsthetics for them. This had relation as it was worded to dentists only. He might say that he took means to inquire whether the practice was at all general and he combined with the inquiry, for his own purposes, an inquiry whether registered practitioners acted in this way for bone-setters. He received a large number of answers which proved that the practice was exceedingly prevalent in the Midlands. He obtained answers from 25 towns that medical practitioners were in the habit of giving anæsthetics for unregistered dentists. He found that in some instances the name of the registered medical practitioner was actually put up in the window of the unregistered dentist as giving anæsthetics for him. He also learned incidentally that in a few of these cases they also gave anæsthetics for bone-setters. He had got confidentially the names of twenty-three registered medical men who were in the habit, according to his informants' statements—and some of them offered to get positive evidence if it were needed—who were in the steady habit of administering anæsthetics for unregistered dental practitioners. He thought, therefore, there was very good cause for the Council adopting this recommendation. He had also talked to a number of the leading anæsthetists and he found that the Society of Anæsthetists had avoided this subject as being rather dangerous ground, but among those to whom he had spoken there was the opinion that the thing was extremely wrong and should be stigmatised and dealt with.

Dr. MACALISTER moved:—

That the reissue of the notice of Nov. 24th, 1892, be delayed until it could be accompanied by a supplementary notice to be framed by the legal adviser of the Council in the sense of the foregoing resolutions.

That was the resolution pertaining to the administration of anæsthetics.

Mr. HORSLEY, seconding the motion, said that of course

while this was sufficient as regards the dentists it was not sufficient as regards the medical practitioners.

The motion was put to the Council and adopted.

Mr. HORSLEY: Should we not have a resolution to send to the medical practitioners?

The PRESIDENT: Perhaps we had better see this draft first.

Mr. CARTER presented a report from the Executive Committee as to dental business other than matters pertaining to the Dental Committee transacted since the last session of the Council. This report dealt with four items of business. The first had reference to restorations to the Dentists Register. The second set forth a resolution of the Irish Branch Council instructing the local registrar to keep a Dentists Register and in this connexion Mr. Carter explained that the legal advisers gave the opinion that the Irish Branch Council were exceeding their powers. The third item was a letter from the Royal College of Surgeons of England saying that the recommendations of the Council in regard to dental education and examination had been referred by the Council of the College to the Board of Examiners in Dental Surgery for consideration. The last item was an application from a dentist in Ballarat, Victoria, to be registered as a colonial dentist under Section 10 of the Dentists Act on the ground that he had passed the qualifying examination of the Dental Board of Victoria in accordance with the provisions of the (Colonial) Dentists Act (1897). The Executive Committee recommended that the application be granted.

This recommendation was adopted by the Council.

Dr. MACALISTER reminded members that the granting of this application meant the opening of the Colonial list.

Close of the Session.

The PRESIDENT announced that this closed the programme of the session.

Dr. GLOVER moved a vote of thanks to Sir William Turner for his conduct in the chair. He did not remember any session when the work had been more prolonged or more trying to the President than on this occasion and he was quite sure that all the members must admire the good temper shown by him and the grasp he had taken of the business of the session.

The motion was carried by acclamation.

The PRESIDENT said he was greatly obliged to his colleagues for this vote of thanks. He admitted that the session had been prolonged and at times trying, but he would like to say this, that his colleagues had loyally supported him and he begged to thank them.

To the Editors of THE LANCET.

SIRS,—In your otherwise excellent report of the meeting of the General Medical Council on p. 1525, *re* myself you say that I was willing to withdraw my notice of motion concerning personation of registered practitioners. Permit me to point out that I did not offer to withdraw this motion and that it was subsequently carried.

I am, Sirs, yours faithfully,

Cavendish-square, W., Dec. 3rd, 1898. VICTOR HORSLEY.

Medical News.

ROYAL COLLEGE OF SURGEONS IN IRELAND—FELLOWSHIP EXAMINATION.—The following candidates having passed the necessary examination have been admitted Fellows of the College:—

Mr. R. Allen, Belfast, M.B., B.Ch., &c., Royal University; Mr. W. J. Corrigan, Cardiff, L.R.C.P.I., L.R.C.S.I., &c.; Mr. A. Cuffe, Essex, L.R.C.S.I., L.A.H., &c.; Miss J. G. Horwood, Aylesbury, L.R.C.P. Edin., L.R.C.S. Edin., &c.; and Mr. J. O'Callaghan, Pallas-green, L.R.C.S.I., L.R.C.P. Edin., &c.

The following candidates passed the primary part of the Fellowship Examination:—

Mr. M. O'Sullivan, Dublin, M.B., B.Ch., &c., Royal University; and Mr. L. J. Whelan, L.R.C.P.I., L.R.C.S.I., &c.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND.—At the monthly meeting of the President and Fellows of the College held on Dec. 2nd Mr. John Joule, L.S.A., was admitted a Licentiate in Medicine of the College.

SIR SQUIRE BANCROFT will read his arrangement of Dickens's "Christmas Carol" at St. Martin's Town Hall, Charing-cross-road, on Thursday afternoon, Jan. 12th, 1899, on behalf of the Royal London Ophthalmic Hospital, Moorfields.

SANITATION AND RELIGION.—At the Plympton (Devon) Ruridecanal Conference, held on Dec. 1st, Mr. S. Noy Scott, L.R.C.P. Lond., read a paper on Sanitation and Religion in which he contended that the promotion of santation was distinctly a religious duty.

MEDICAL MISSIONS.—At a large meeting held in Plymouth on Nov. 30th the Bishop of Crediton and Dr. Lankester, medical secretary of the Church Missionary Society, strongly advocated the claims of the proposed medical mission for the Khartoum and Nile Valley.

LITERARY INTELLIGENCE.—Mr. Henry Frowde, Oxford University Press, is publishing a monograph on the Micro-organism of Faulty Rum, by Professor V. H. Veley, F.R.S., and Lilian J. Veley. We are informed that the micro-organism has hitherto escaped observation because it was supposed that no organism whatever could live in liquid of such alcoholic strength as rum.

THE GENERAL MEDICAL COUNCIL AND UNQUALIFIED ASSISTANTS.—At Landore (Glamorganshire) station on Nov. 28th a deputation met Dr. J. Havard Jones on his return from London, where he had appeared before the General Medical Council on a charge of employing an unqualified assistant, the case being dismissed. A brass band and about 4000 colliers, &c., escorted Dr. Jones to his residence. The whole village was illuminated.

NEW HOSPITAL AT NEWTON ABBOT.—A new hospital given to Newton Abbot, Devon, by the late Mrs. Fisher in memory of her late husband and built on a site of land presented by Mr. Scratton was formally opened by Mrs. Scratton on Nov. 29th. The building will contain accommodation for 27 in-patients and has been erected at a cost of £6000. The residents of Newton Abbot subscribed £1044 in commemoration of the Queen's Diamond Jubilee and this will be used towards the endowment of the hospital. A glass air-tight instrument case has been placed in the operation theatre by Mrs. H. S. Gaye in memory of her late husband, Dr. Gaye, who was the founder of the old Newton Abbot Cottage Hospital.

UNIVERSITY OF CAMBRIDGE.—The following elections of medical graduates as members of boards and syndicates are announced:—Dr. D. MacAlister to the Agricultural Syndicate and the Medical Board; Dr. F. Darwin to the Museums and Lecture-room Syndicate; Dr. Guillemard to the Antiquarian Committee; Dr. Laurence Humphry and Dr. Collingridge to the State Medicine Syndicate; Dr. Barclay-Smith to the Biology and Geology Board; Mr. E. G. Browne to the Board for Indian Civil Service Studies; Dr. Bayley Balfour to the Board of Electors for the Chair of Botany. The examiners in sanitary science for the ensuing year are Dr. Anningson, Professor Kanthack, Dr. Collingridge, Dr. Lane Notter, and Dr. John Stevenson. Mr. Stabb, university lecturer in midwifery, is appointed to examine in the third M.B. examination instead of Dr. Barbour who is indisposed. The John Walker Studentship for Pathological Research, value £200 a year for three years, will be vacant this month. Candidates are requested to communicate with Professor Kanthack before Jan. 19th, 1899.

CORPORATE AND MEDICAL REFORM ASSOCIATION, LIMITED.—At a meeting of the Executive Committee of this association, held at the residence of Dr. Tom R. Taylor, Guilford-street, Russell-square, W.C., on Dec. 6th, Mr. A. S. Morton in the chair, after ele ction of eight members resident in Oldham, Leeds, Croydon, and Gravesend, on the secretarial report of proceedings on the memorial presented by the association to the General Medical Council, a resolution was unanimously adopted thanking Sir Christopher Nixon, Sir William Thomson, Dr. Glover, Mr. George Brown, Mr. Victor Horsley, Dr. William Bruce, Dr. Bennett, and Mr. Tichborne for proposing, seconding, and supporting a motion "That a special committee be appointed to onsider and report at the next session of the

Council all cases of alleged infringement of the Medical Acts by persons who profess to examine candidates in medicine, surgery, or allied subjects, and to grant certificates or diplomas testifying as to the proficiency of any branch of medical or surgical science."

ROYAL INSTITUTION.—A general monthly meeting of the members of the Royal Institution was held on the afternoon of Dec. 5th, Sir James Crichton Browne, M.D. Edin., F.R.S., treasurer and vice-president, presiding. Among others Dr. C. T. Williams and Mr. H. W. Allingham were elected members. The special thanks of the members were returned to Dr. George Wyld for his present of a portrait of Dr. Thomas Garnett, first professor in the Royal Institution.

THE PLAGUE COMMISSION.—According to the *Times of India* the Governor-General of India has published a resolution with reference to the Plague Commission that "there must be many valuable items of information to be ascertained from officers who have been employed on plague operations that have not been recorded in official reports, and there are also many circumstances connected with outbreaks in different places which require to be locally examined by persons who can collate facts and form conclusions which will be accepted by the public as well as scientific opinion in respect of them." The resolution adds that the Government of India "regard it as very desirable that authoritative scientific opinion be obtained as to the value of prophylactic and therapeutic serums in dealing with the plague."

BOOKS, ETC., RECEIVED.

ARNOLD, F., Bedford-street, Strand, London.
Physical Chemistry for Beginners. By Ch. M. Van Deventer. With a Preface by J. H. Van T. Hoff. Translated by R. A. Lehfeldt, D.Sc. Price 2s. 6d.

BAILLIÈRE, J. B., ET FILS, Paris.
Radioscopie et Radiographie Cliniques. Par Dr. L. R. Regnier. 1899.
Maladies du Larynx, du Nez, et des Oreilles. Par A. Castex. 1899.

BAUERMEISTER, F., Glasgow.
Neubauer und Vogel: Anleitung zur Analyse des Harns: Analytischer Theil, zehnte Auflage. Von Dr. H. Huppert. 1898.

BLACKIE & SON, London.
The Principles and Practice of Modern House Construction. Edited by G. Lister Sutcliffe. Illustrated. Vol. III.

CHURCHILL, J. & A., Great Marlborough-street, London.
The Pharmaceutical Formulary. Edited by J. O. Braithwaite. Twelfth Edition. 1899. Price 6s. 6d.
Transactions of the Ophthalmological Society of the United Kingdom. Vol. XVIII. Session 1897-98. With List of Officers, Members, &c. 1898. Price 12s. 6d.
Year-book of Pharmacy and Transactions of the British Pharmaceutical Conference. 1898.
A Treatise on Human Anatomy. By various Authors. Edited by Henry Morris, M.A., M.B. Lond. Second Edition. Illustrated. 1898. Price 36s.

DIGBY LONG AND CO., Bouverie-street, Fleet-street, London.
The Latest Fruit in the Ripest, or Women's Work. By F. T. Gant, F.R.C.S. Second Edition. 1898. Price 1s. 6d.

ENKE, F., Stuttgart.
Handbuch der Schulhygiene. Von Dr. A. Baginsky. Dritte Auflage. Erster Band. 1898.

FANNIN AND CO., Grafton-street, Dublin.
Transactions of the Royal Academy of Medicine in Ireland. Vol. XVI. Edited by J. B. Story, M.B., F.R.C.S. 1898.

FISCHER, G., Jena.
Handbuch der Therapie innerer Krankheiten. Von Dr. F. Penzoldt und Dr. R. Stintzing. Parts XVIII., XIX., and XX. 1898.

GARDNER, ALEX., Paternoster-square, London, and Paisley.
Robert Burns and the Medical Profession. By William Findlay, M.D. With 13 portraits. 1898. Price 5s. net.

HIRSCHWALD, A., Berlin.
Fango-Behandlung. Von Dr. H. Davidsohn. 1898.

KIMPTON, HENRY, High Holborn, London.
Practical Diagnosis: The Use of Symptoms in the Diagnosis of Disease. By H. A. Hare, M.D., B.Sc. Third Edition. Illustrated. Price 21s. net.
A Text-book of Practical Therapeutics. By H. A. Hare. Seventh Edition. Illustrated. 1899. Price 21s. net.

LEWIS, H. K., Gower-street, London.
A Treatise on "Unripe" Cataract. By Wm. A. McKeown, M.D., M.Ch. Illustrated. 1898. Price 12s. 6d. net.

LONGMANS, GREEN, AND CO., Paternoster-row, London.
My Inner Life, being a Chapter in Personal Evolution and Autobiography. By J. B. Crozier. 1898. Price 14s.
Doctor Therne. By H. Rider Haggard. 1898. Price 3s. 6d.
The Harveian Oration, October, 1898. By Sir Dyce Duckworth, M.D., LL.D. Price 2s. 6d.
On Varix and Thrombosis. By W. H. Bennett, F.R.C.S. Eng. Reprint. 1898. Price 3s. 6d.

NEWNES, GEORGE, Southampton-street, Strand, London.
Flashlights on Nature. By Grant Allen. Illustrated. 189 Price 6s.

NEW SYDENHAM SOCIETY, London.
The New Sydenham Society's Lexicon of Medicine and the Allied Sciences. Twenty-fourth Part. Scap—Tape. 1898.

NOSTRAND, D. VAN, COMPANY, New York.
Report on the Purification of the Ohio River Water at Louisville, Kentucky. By George W. Fuller. 1898.

PEARSON, C. A., Henrietta-street, Covent-garden, London.
Strange Stories of the Hospitals. By Frank Aubrey. 1898. Price 1s. and 1s. 6d.
Mad Humanity: its Forms Apparent and Obscure. By L. F. Winslow, D.C.L. Oxon., M.B., LL.M. Camb. 1898. Price 7s. 6d.

PENTLAND, YOUNG J., Edinburgh and London.
The Radical Cure of Hernia, Hydrocele, and Varicocele. By C. B. Lockwood, F.R.C.S. Illustrated. 1898.

PILLING, G. P. AND SON, Philadelphia, U.S.A.
On the Phonendoscope and its Practical Application. By Aurelio Bianchi, M.D. Parma. Illustrated. 1898.

TAYLOR AND FRANCIS, Red Lion-court, Fleet-street, London.
Quero: Some Questions in Matter, Energy, Intelligence, and Evolution. By Jas. H. Keeling, M.D., F.R.C.S. With diagrams. 1898.

UNWIN, T. F., Paternoster-square, London.
The Century Invalid Cookery Book. By Mary A. Boland, edited by Mrs. Humphry. 1898. Price 3s. 6d.
My Horse, My Love. By Sara Buckman-Linard. Illustrated. 1898. Price 3s. 6d.

WYSS, K. J., Bern.
Illustrirte Rundschau der Medicinisch-Chirurgischen Technik. Herausgegeben von Dr. G. Beck. Jahrgang 1898.

Nine Medical Songs. Words by J. Blumfeld, G. H. Ransome, and F. H. The music by C. N. Chadborn. To be obtained of the Librarian, St. George's Hospital, London, S.W. Price 2s. 6d.—Transactions of the Iowa State Medical Society. Vol. XVI. Forty-seventh Annual Session, 1898. (The Keehn-Hafner Mfg. Co., Burlington, Iowa, 1898.)—Letts's Office Diary and Almanac for 1899, No. 1. Letts's Office Diary and Almanac for 1899, No. 3. Letts's Pocket Diary and Almanac for 1899. Letts's One-day Pocket Diary and Almanac for 1899. (Cassell and Co., London.)—Magazines, &c., for December; Strand Magazine, Boy's Own Paper, Girl's Own Paper, Leisure Hour, Sunday at Home, Ludgate Magazine, Westminster Review, Contemporary Review, Friendly Greetings, Chapman's Magazine, Myra's Journal, Pall Mall Magazine, Windsor Magazine, Cornhill Magazine, Blackwood's Magazine, Pearson's Magazine, English Illustrated Magazine, Knowledge, Humanitarian, St. Peter's Magazine.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

ARBUCKLE, H. W., M.D. Aberd., L.R.C.P. Edin., L.F.P.S. &c. D.P.H. Camb., has been re-appointed Medical Officer of Health to the Thorne District Council.

ARMOUR, DONALD, B.A., M.B. Tor., M.R.C.P. Lond., M.R.C.S., has been appointed a Senior Demonstrator of Anatomy for the University College, London.

BAILEY, FRANCIS WILLIAM, M.R.C.S., L.R.C.P. Lond., has been appointed Honorary Anæsthetist for the Liverpool Dental Hospital.

BATE, J. BRABANT, has been appointed a Resident Medical Officer for the Mogden Isolation Hospital by the Borough of Richmond (Surrey) and the Heston and Isleworth Urban District Joint Isolation Hospital Committee.

BETHELL, A., M.R.C.S., has been re-appointed a Medical Officer by the Bridgenorth Rural District Council.

BOLLANS, R. W., M.B., Ch.B. Vict., has been appointed a Medical Officer for the Hadfield Sanitary District of the Glossop Union.

BURT, W. C., L.R.C.P. Lond., M.R.C.S., has been appointed a Medical Officer for the Torrington Workhouse.

COLLIER, HORACE STANSFIELD, F.R.C.S., has been appointed Assistant Surgeon for the Hospital for Sick Children, Great Ormond-street, London, W.C.

DAVIES, W. N., M.D., M.Ch. Irel., has been re-appointed Medical Officer of Health by the Llantrisant and Llantwit Vardre Rural District Council.

DICKSON, GRAEME, L.R.C.P. Eng., &c., has been re-appointed Medical Officer of Health by the Hay Urban District Council.

EARNSHAW, A., M.B. Lond., L.R.C.P., M.R.C.S., has been appointed a House Physician for the Bradford Royal Infirmary.

EVANS, LANCING, M.A., M.B., B.C. Cantab., has been appointed a House Surgeon for the Royal Orthopædic Hospital, 297, Oxford-street, and 14, Hanover-square, London, W., vice Percy W. Kent, resigned.

FAIRBANK, F. R., M.D. Heidelb., F.R.C.P. Edin., L.R.C.P. Lond., M.R.C.S., has been appointed a Medical Officer for the Western Sanitary District of the Dorking Union.

GARDNER, THOS. HUDSON, M.R.C.S., L.R.C.P., has been appointed Resident Medical Officer to the Royal Hospital for Diseases of the Chest, City-road, E.C., vice J. B. Maxwell.

GREENWOOD, A. C., L.R.C.P. Lond., M.R.C.S., has been appointed a Medical Officer for the Corby Sanitary District of the Bourne Union, vice F. T. Fletcher, resigned.

HARNESS, H. NELSON, M.R.C.S., L.R.C.P. Lond. has been appointed a Third Assistant Medical Officer for the Kent County Asylum, Chartham, near Canterbury, Kent.

HARVEY, FRANK, M.R.C.S. Eng., L.S.A., has been re-appointed Medical Officer of Health by the Padstow (Cornwall) Urban District Council.

HICKS, H. T., M.R.C.S., L.R.C.P., has been appointed Junior Resident Medical Officer and Registrar for the Evelina Hospital for Sick Children, Southwark-bridge-road, London.

JACOB, E. L., M.R.C.S., has been re-appointed Medical Officer of Health by the Walton Urban District Council.

JONES, R. R., L.R.C.P. Edin., M.R.C.S., has been appointed Superintendent for the Bangor Infectious Diseases Hospital, vice L. Jones.

LOW, J. SPENCER, M.B., B.Ch., B.Sc. Edin., has been appointed by the India Office a Medical Officer for special plague duty in India.

LYLE, W., M.B., B.Ch. Irel., has been appointed a Medical Officer for the Newtonstewart Dispensary District, vice R. J. Roulston, resigned.

MILNE, J. A., M.B., C.M. Aberd., has been appointed an Assistant Medical Officer for the Workhouse of the Leeds Union, vice J. Johnstone, resigned.

MOORE, H. C., M.R.C.S., has been appointed, *pro tem.*, a Deputy Medical Officer for the City of Hereford.

RICE, DAVID, L.R.C.P. Lond., M.R.C.S., has been appointed House Physician for the Bethlem Royal Hospital, London.

STEVENS, A. R., M.B. Durh., L.R.C.P. Lond., M.R.C.S., has been appointed House Physician for the Bethlem Hoyal Hospital, London.

SUTCLIFF, R. H., M.B. Durh, L.R.C.P. Lond., M.R.C.S., has been appointed a Medical Officer for the Torrington Sanitary District.

TAYLOR, R. C., M.D. Lond., B.S., F.R.C.S., has been appointed a Medical Officer for the Hampstead Workhouse.

UNDERWOOD, F. L., L.R.C.P. Lond., M.R.C.S., has been appointed a Medical Officer for the Third Sanitary District of the Daventry Union.

WILLIAMS, J. D., M.D. Edin., B.Sc., has been appointed a Gynæcologist for the Cardiff Infirmary.

WILLIAMS, W. T., M.R.C.S., has been appointed a Medical Officer for the Chorlton and Manchester Joint Workhouse.

WOOD, R.M., L.R.C.P. Lond., M.R.C.S., has been appointed House Surgeon for the Tiverton Infirmary, vice H. England, resigned.

WRIGHT, F. W., M.R.C.S., has been appointed a Medical Officer and Public Vaccinator for the Southern Sanitary Districts of the Godstone Union.

Vacancies.

For further Information regarding each vacancy reference should be made to the advertisement (see Index).

COUNTY ASYLUM, Prestwich, Manchester.—Assistant Medical Officer, unmarried. Salary £100 a year, increasing to £250 by successive increments of £25, with apartments, board, attendance, and washing.

COUNTY HOSPITAL, Ryde.—House Surgeon. Salary £50 per annum, with board, lodging, &c.

DERBY COUNTY ASYLUM, Derby.—Assistant Medical Officer, unmarried. Salary £120 per annum, rising to £150, with board, lodging, and washing.

EDMONTON UNION.—District Medical Officer for the Edmonton District. Salary £60 per annum and 20 per cent. thereon in lieu of payment for expensive medicines, with certain extra fees. The district medical officer will also be appointed Public Vaccinator. Applications to the Solicitor and Clerk, Lower Tottenham.

FOREST HILL PROVIDENT DISPENSARY.—Medical Officer. Applications to Hon. Secretary, Yale Cottage, Inglemere-road, Forest-hill, S.E.

GENERAL INFIRMARY AT GLOUCESTER, AND THE GLOUCESTERSHIRE EYE INSTITUTION.—Assistant House Surgeoncy for six months. Board, residence, and washing provided.

HARRIS PARISH COUNCIL.—Medical Officer and Public Vaccinator for the Southern Division of Harris. Salary £30. Other emoluments. Apply to Mr. T. Wilson, Solicitor, Lochmaddy.

HOSPITAL AND DISPENSARY, Newark-upon-Trent.—House Surgeon, unmarried. Salary £80 per annum, with board and lodging in the hospital.

HULME DISPENSARY, Manchester.—House Surgeon. Salary £130 per annum, with apartments, attendance, coal, and gas.

LAMBETH INFIRMARY, London.—Resident Clinical Assistant and Second Assistant to the Medical Superintendent for six months. Salary at the rate of £50 per annum. Applications to the Medical Superintendent, Brook-street, Kennington-road, S.E,

LIVERPOOL NORTHERN HOSPITAL.—Assistant House Surgeon. Salary £70 per annum, with residence and maintenance in the House.

LIVERPOOL STANLEY HOSPITAL.—Junior House Surgeon. Salary £70, with board, lodging, and washing.

MANCHESTER ROYAL INFIRMARY.—Resident Medical Officer for one year, unmarried. Salary £150 per annum, with board and residence.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies-street, London, W.C.—Medical Superintendent. Salary £100 per annum, furnished apartments, fire, light, and attendance, with certain fees.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (ALBANY MEMORIAL), Queen-square, Bloomsbury, London.—Assistant Physician.

PADDINGTON-GREEN CHILDREN'S HOSPITAL, London, W.—Surgeon to Out-patients.

PARISH OF ST. PANCRAS, London.—Second Assistant Medical Superintendent for the Infirmary, Dartmouth-park-hill, N., for one year. Salary £75 per annum and residential allowances. Applications to the Clerk to the Guardians, Vestry Hall, Pancras-road, N.W.

ROYAL ALBERT EDWARD INFIRMARY AND DISPENSARY, Wigan.—Junior House Surgeon for twelve months. Salary £80 per year, with apartments and rations, exclusive of wines, spirits, and washing.

ROYAL HANTS COUNTY HOSPITAL.—House Surgeon, unmarried. Salary £75 per annum, with board, residence, &c. Applications to the Secretary, Winchester.

ROYAL SEA-BATHING HOSPITAL, Margate.—Assistant Resident Surgeon. Salary £52 per annum, with board and residence. Applications to the Secretary, R. S. B. Hospital Offices, 30, Charing-cross, London, S.W.

SUNDERLAND AND NORTH DURHAM EYE INFIRMARY.—House Surgeon. Salary £150 per annum, outdoor.

UNIVERSITY OF EDINBURGH.—An additional Examiner in Zoology.

WATERFORD DISTRICT ASYLUM.—Temporary Assistant Medical Officer for at least three months. Unmarried. Salary £3 3s. per week, with furnished apartments, attendance, rations, &c.

WEST BROMWICH DISTRICT HOSPITAL.—House Surgeon, unmarried. Salary £80 per annum, with board, residence, and washing.

WILTSHIRE COUNTY COUNCIL.—County Medical Officer of Health. Salary £500 per annum, with certain allowances. Aplications to the Clerk to the Council, County Offices, Arlington House, Trowbridge.

YORK DISPENSARY.—Resident Medical Officer, unmarried. Salary £150 a year, with furnished apartments, coals, and gas.

Births, Marriages, and Deaths.

BIRTHS.

FIDO.—On Nov. 29th, at "Raleigh," Arodene-road, Brixton-hill, S.W. the wife of H. Adamson Fido, M.R.C.S., L.R.C.P., of a son.

LAWS.—On Dec. 2nd, at East Circus-street, Nottingham, the wife of W. G. Laws, M.B., of a daughter.

TEBB.—On Dec. 3rd, at Beverley-road, Anerley, the wife of W. Scott Tebb, M.A., M.D. Cantab., of a son.

THOMSON.—On Dec. 2nd, at The Avenue, Ealing, W., the wife of George Thomson, M.B., of a daughter.

MARRIAGES.

BERNSTEIN—BERNSTEIN.—On Dec. 6th, at the St. John's-wood Synagogue, M. Bernstein, M.R.C.S., L.R.C.P., to Sara, daughter of Mrs. Rose Bernstein, Cromer Lodge, West-end-lane, N.W.

FORDE—SANGSTER.—On Nov. 30th, at St. Peter's, Cranley-gardens, S.W., Robert Michael Forde, Colonial Medical Service, to Alice Maude, youngest daughter of Major Sangster, late 97th Regiment.

MCNAB—FORDHAM.—On Nov. 30th, at St. Mark's, Hamilton-terrace, N.W., by the Rev. R. Duckworth, D.D., Sub-Dean of Westminster, Alexander Anderson McNab, M.B., C.M., son of William McNab, Banker, Bothwell, to Mary, youngest daughter of John Fordham, Esq., Brondesbury, London. No cards. At home Dec. 13th, 14th, and 15th, 15, Wesley-road, Armley, Leeds.

DEATHS.

BOND.—On Nov. 28th, at Waterloo House, Brill, Bucks, William James Bond, M.B., L.R.C.S. and L.M. Edin., aged 45 years.

LAWRENCE.—On Dec. 2nd, James Eli Lawrence, M.R.C.S., of Dorking, aged 65 years.

MACFARLANE.—On Dec. 4th, at the Hospital for Consumption, Bromption, S.W., James J. L. Macfarlane, M.B., C.M. Edin., aged 28 years.

WALFORD.—On Dec. 5th, at Oxford-road, Reading, T. L. Walford, M.R.C.S., in his 87th year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (12th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (9.30 A.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.), London Throat Hospital (2 P.M.).

TUESDAY (13th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat Hospital (2 P.M. and 6 P.M.), Royal Ear Hospital (3 P.M.).

WEDNESDAY (14th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat Hospital (2 P.M.).

THURSDAY (15th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex, (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.).

FRIDAY (16th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat Hospital (2 P.M. and 6 P.M.).

SATURDAY (17th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.), London Throat Hospital (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (12th).—MEDICAL SOCIETY OF LONDON.—8.30 P.M. Mr. B. Pitts: The Transperitoneal Ligation of the Iliac Arteries.—Mr. C. S. Wallace: Acute Suppurative Peritonitis.

SOCIETY OF ARTS.—8 P.M. Prof. V. B. Lewes: Acetylene. (Cantor Lecture.)

TUESDAY (13th).—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—8.30 P.M. Paper:—Mr. J. Hutchinson, jun., and Mr. H. L. Barnard: On an Improved Method of Treatment of Separation of the Lower Epiphysis of the Femur (with lantern demonstration).

PHARMACEUTICAL SOCIETY OF GREAT BRITAIN (17, Bloomsbury-square, W.C.).—8 P.M. Paper:—Mr. W. M. Holmes: Deep Sea Deposits (illustrated by lantern slides).

WEDNESDAY (14th).—DERMATOLOGICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish-square, W.).—5.15 P.M. Demonstration of Clinical Cases.

SOUTH-WEST LONDON MEDICAL SOCIETY (Stanley's, 235, Lavender-hill, S.W.).—8.30 P.M. Mr. H. T. Mursell: Some Points in the Diagnosis and Treatment of Urethral Stricture.

NORTH-WEST LONDON CLINICAL SOCIETY (North-West London Hospital).—8.30 P.M. Demonstration of Clinical Cases.

SOCIETY OF ARTS.—8 P.M. Sir A. Rollit: Commercial Education.

THURSDAY (15th).—HARVEIAN SOCIETY OF LONDON (Stafford Rooms, Titchbourne-street, Edgware-road).—8.30 P.M. Dr. W. Ewart: Disease, its Treatment and the Profession of Medicine in 1899. (Harveian Lecture.)

NEUROLOGICAL SOCIETY OF LONDON (11, Chandos-street, W.).—8.30 P.M. Pathological Meeting. Communications:—Dr. F. W. Mott: Changes in the Brain, Muscles, and other Organs found in Persons having Died with prolonged Epileptiform Convulsions.—Dr. F. E. Batten: Congenital Abnormalities in the Nervous Systems of Three Children—(1) Non-development of Left Cerebral Hemisphere, &c.; (2) Hydromyelia and Congenital Defect of the Cerebellum; (3) Heterotopia in Association with Spina Bifida.—Dr. H. H. Tooth and Dr. R. Russell: Acute Myelitis with Bacteriological Examination.

FRIDAY (16th).—EPIDEMIOLOGICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish-square, W.).—8.30 P.M. Paper:—Dr. A. Ransome: The Prospect of Abolishing Tuberculosis.

SOCIETY OF ANÆSTHETISTS (20, Hanover-square, W.).—8.30 P.M. Discussion on Selection of an Anæsthetic (opened by Mr. E. F. White).

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

TUESDAY (13th).—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-sq., W.C.).—3.30 P.M. Mr. Victor Horsley: Surgery of the Nervous System.

WEST-END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM (73, Welbeck-street, W.).—4 P.M. Dr. D. Grant: Cases of Nervous Disorder of the Pharynx, Larynx, and Œsophagus.

WEDNESDAY (14th).—THE LONDON SKIN HOSPITAL (40, Fitzroy-square, W.).—4 P.M. Dr. Shuldham: The Erythemata.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton).—4 P.M. Dr. Schorstein: Hæmoptysis.

THE SANITARY INSTITUTE, (Parkes Museum, Margaret-street, W.).—8 P.M. Discussion on Some Prevalent Fallacies in Vital Statistics (opened by Dr. E. F. Willoughby).

THURSDAY (15th).—THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Mr. Kellock: Demonstration of Selected Cases.

LONDON TEMPERANCE HOSPITAL.—2 P.M. Dr. S. Fenwick: Clinical and Pathological Demonstration to Senior Students.

CHARING-CROSS HOSPITAL.—4 P.M. Mr. Gibbs: Demonstration of Surgical Cases. (Post-Graduate Class.)

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

THE CONSUMPTION OF ALCOHOL IN FRANCE.

IN 1874, according to *La Tribune Médicale*, the number of drinking establishments in France was 342,980 without counting Paris, the capital being responsible for about 40,000. Since then, although the population has remained comparatively stationary, the liquor shops have increased to an alarming extent, the total number in 1896 amounting to 432,047, which represents an augmentation of 25 per cent. With respect to the quantity of wine consumed by individuals Boulogne-sur-Seine heads the list with the enormous allowance of 58½ gallons per head. Next in order come Nice, Saint-Etienne, Grenoble, Troyes, Toulouse, and finally Paris, where the annual amount per head is 44·6 gallons. As regards alcohol in the form of brandy and other spirituous compounds Rouen stands first with nearly 4 gallons per head per annum. Havre and Cherbourg are not far behind, and the next in succession are Boulogne-sur-Mer, Brest, and Lorient, all being seaports. In Paris the individual consumption of alcohol is about 2 gallons each year. Considering that women and children are included in the statistics and that male abstainers exist these amounts can only be styled excessive.

"THE QUALIFICATION OF L.A.H. DUBLIN."

To the Editors of THE LANCET

SIRS,—Under the above heading in THE LANCET of Dec. 3rd, 1898, it is stated: "The Licence of the Apothecaries' Hall of Dublin in 1880 was, as it is now, a Licence in Medicine only." I have to inform you that the diploma of this Hall now entitles the holder to be registered in medicine, surgery, and midwifery, as well as to act as a pharmacist for compounding prescriptions. Your kindly correcting the error will greatly oblige the Governor and Court.

I am, Sirs, faithfully yours,

ROBERT MONTGOMERY, M.R.C.S. Eng.,
Mary-street, Dublin, Dec. 5th, 1898. Secretary.

*** Our statement was based upon information obtained for us from the representative of the Apothecaries' Hall of Dublin upon the General Medical Council.—ED. L.

BAD STEAKS.

THE case of Frost *v.* North heard a short time ago in the Shoreditch County Court in which His Honour Judge French has since refused to give leave to appeal is one apparently of considerable hardship to the plaintiff. An omnibus-driver entered an eating-house where he was accustomed to dine and ordered a beefsteak, poured some sauce over it, and proceeded to eat it. The first mouthful struck him as tasting unpleasantly; thinking the sauce was bad he scraped it off, and having eaten one or two more mouthfuls declared the meat bad, ate no more, and went out. He subsequently suffered more or less severely from ptomaine poisoning and in consequence sought to recover damages from the person who sold him the steak. In these circumstances one might have thought that if the plaintiff was to be defeated it would be owing to some principle of law whic

absolved the eating-house keeper from the necessity of supplying wholesome food to his customers. The ground, however, of Judge French's decision in the defendant's favour was, to quote his words as reported in giving his final decision, "If a man is such a fool as to eat bad steak then he must take the consequences." One can only wonder on what evidence such a decision was based, as legal decisions are usually supposed to be based on sworn testimony which in this case would have been that of an expert witness. No one surely can have informed the court that in cases of unwholesome food the taste is so convincingly obvious that no one but a fool would eat or drink it. If this were the case typhoid fever and various other diseases would be confined to persons of defective mental capacity. We should have thought no one would blame an omnibus-driver for not knowing that two or three mouthfuls of high meat might make him ill. He ate no more, apparently, than enough to satisfy himself that the food was nasty, but the learned judge seems to have arrived at the conclusion that it was so nasty that it ought to have warned him before he ate so much. How his honour could come to so decided an opinion as to the precise pitch of nastiness to which the steak had attained is the most puzzling point of all. The degree of nastiness could hardly be established by evidence.

THE MEDICAL PROFESSION AND SECRET REMEDIES.

To the Editors of THE LANCET.

SIRS,—Will you be so good as to give me your opinion on the following. Can a member of the profession dispense a secret remedy (the composition of which is known only to himself) and with which his name is associated more or less) without laying himself open to a charge of "unprofessional conduct"?—I am, Sirs, yours faithfully,

Dec. 5th, 1898. M.B.

*** A member of the medical profession should under no circumstances dispense a secret remedy.—ED. L.

QUACKERY.

UNDER the heading "A Herbalist in Trouble" we noted in THE LANCET of August 27th the fact that Mr. Samuel Matthews, a former member of the Norwich Town Council, had been fined £1 for illegally using the title of "Surgeon" and £20 at the suit of the Society of Apothecaries of London for illegally acting as an apothecary. From a cutting from a Lowestoft paper of recent date we see that "Dr." Matthews and his son still carry on their trade of quackery. We do not know whether they are still acting as "apothecaries"—that is to say, in the sense in which they would come under the arm of the law—but, as we have so often said, if it be necessary to have a licence to sell buttons and string in the street or from door to door we cannot understand why it should not equally be necessary to have a licence to be a quack practitioner.

"THE TITLE OF 'DR.'"

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Dec. 3rd Mr. Collingwood considers it harsh that non-graduate diplomates should not be permitted to use the title of "Dr." Did it ever strike your correspondent that the harshness is on the other side? I held the two diplomas (not the double but by separate examinations) of Edinburgh and after being in practice a considerable number of years went to much trouble and expense in reading for the degree at St. Andrews. During the spare time of about two years I denied myself the recreation that my daily work justified me in taking for pleasure and rest in reading for the examination and, I may observe, had I not done this I should have returned, as one gentleman did in my year, without the degree. The examination was a thoroughly searching one and covered pretty well the whole field of medicine and surgery, notwithstanding the notion which appears to exist in the minds of some who have never crossed the border in their lives that the ten degrees granted each year are given away. Twelve candidates were summoned and if less than ten were found to satisfy the examiners others were telegraphed for from the reserve list of candidates in waiting each year. I had to wait three years. I therefore fail to see the harshness meted out to diplomates who as students knew perfectly well that if they expected the title of "Dr." they must take two (only) of their years at a university and that if they went for the College diplomas only they would remain only "Misters." I for one knew this, and though I could not afford it as a student I determined at the first opportunity to obtain a university degree. St. Andrews now only grants the degree by graduation, but Durham is still available to qualified men over a certain age and Brussels is always available. I am, Sirs, yours faithfully,

Dec. 4th, 1898. M.D. ST. ANDREWS.

THE CHORLTON GUARDIANS AND LADY MEDICAL OFFICERS.

QUITE a warm discussion took place at the meeting of the Chorlton Board of Guardians on Nov. 24th *re* lady medical officers showing that even yet their advent does not always herald peace. One of the guardians objected to a minute in the report of the house committee "recommending the appointment o a lady doctor temporarily to fill the place of Dr. Higginson" who w s not well at the time. It seems that there was a difficulty in obtaini g the services of the creature called by a lady guardian a "man-doct r" for so short a period as eleven days. One lady medical officer is at the workhouse already, but the work is heavy and no doubt elp was required, but some of the guardians objected to a friend of the lady resident medical officer being appointed and one "could not understand why there should be all this wire-pulling to get women doctors where they were not wanted—at any rate by the workhouse people. If it were intended to fill the institution with women doctors it would be as well for them to know at once." It is curious and no doubt speaks well for the chivalry of some of the "man-doctors" that the chief defence of the action of the house committee was by a (male) medical guardian. One of the lay guardians drew a melancholy picture of the condition of the profession when he stated that "there were scores of medical men in the neighbourhood unemployed"—let us hope he is mistaken—"and yet the board had to telegraph to London in order to get a woman to look after the workhouse! It was a disgrace to ask women to undertake such a work." There is no question that in the poor districts of our large towns there is frequently overcrowding of young medical men who hope to rise on the professional ladder by beginning at the lowest rungs, and it is difficult to imagine that the house committee sought very diligently for a temporary substitute for Dr. Higginson among the local men before recommending the appointment of another lady medical officer from London.

"OYSTERS."

To the Editors of THE LANCET.

SIRS,—In reply to Dr. Woodward's query in THE LANCET of Dec. 3rd, allow me to say that at Helford, Cornwall, natives may be obtained absolutely free from contamination of drainage, there being no town up the estuary. I am, Sirs, yours faithfully,

East Molesey, Dec. 3rd, 1898.] W. W. HARDWICKE, M.D. St. And.

"FIST, KNIFE, AND REVOLVER."

MR. FRED GALE, writing in the *Globe* under this heading, gives vent to an aspiration the ferocity of which is justifiable, nay laudable. "Let us hope," he writes, "that we may hear yet of a knife or revolver ruffian being torn to pieces by the populace." Mr. Gale believes that fifty years ago, if times were rougher they were in some respects more humanly minded, and he is certain that any man in a street row who had kicked his enemy or drawn knife or revolver upon him would have been lynched. Now such actions by Hooligans seem in accord with the feelings of the mob.

IMPROPER ADVERTISING.

A CORRESPONDENT sends us a card which he assures us is being distributed by post to "nearly everyone whose name is in the local directory." We append the wording on one side of the card; on the other is a statement to the effect that the card entitles the holder to one week's medical attendance with medicine at home or at surgery according to fee paid.

THE

FULHAM DISPENSARY & SURGERY,

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MEDICAL PRACTITIONERS AND CHARITY MIDWIVES.

To the Editors of THE LANCET.

SIRS,—Without reference to any particular institution by name I would like the opinions of readers of THE LANCET on the following point—viz., how is it that numerous maternity charities are able to carry out their work in the face of the existing resolution of the General Medical Council with regard to the employment of unqualified persons as assistants or otherwise without rendering the medical staffs of these places liable to be judged as guilty of infamous conduct in a professional respect?

Without travelling beyond the town where I reside and which also shall be unmentioned the following existence of affairs here has raised the question in my mind. The local lying-in hospital has at varying distances of from half a mile to a mile or more several establishments. All these are each manned, if I may use the word, by one or more midwives with probationers. The parent institute has, in addition, a resident qualified and registered house surgeon and a visiting medical staff. I should mention, perhaps, that the branches

are only accommodation residences for the midwives to dwell at for the convenience of the poor of the district who are attended at their homes by the former. From the parent institute midwives also go out to attend labour cases in the same way as the midwives from the branches do. The work of these establishments is carried out as follows. When a call comes a midwife, accompanied generally by a probationer, goes out to the case. They carry through the confinement, and unless something abnormal arises neither the house surgeon nor any one of the visiting staff is summoned. True, the house surgeon is expected to see the patient once during the lying-in period if she goes on all right; only if wrong does he give any further attendance. The midwife during the all-right term attends and treats the patient until well without any supervision except that which I have mentioned as fulfilled by the house surgeon. Taking these facts as they stand I would inquire whether the employment of midwives as here depicted, where the immediate personal supervision of a registered medical practitioner is dispensed with, is legitimate or not? In my opinion it is illegal, but rather than depend on my own judgment I wish to learn from others if they think the registered medical practitioners who are privy to and sanction the substitution of their services to unqualified persons and who knowingly countenance, assist, and coöperate in the employment of unqualified persons to attend and "treat patients in respect of matters requiring professional discretion and skill" in the manner I have pointed out are, or are not, guilty of "covering" or of employing unqualified assistants, or are in any way liable to censure by the General Medical Council?

I am, Sirs, yours faithfully,

Nov. 29th, 1898. MEDICAL PRACTITIONER.

"THE COLOUR OF NEWLY-BORN NEGRO CHILDREN."

To the Editors of THE LANCET.

SIRS,—Since for some reason or other there appears to be a divergence of opinion as to the colour of newly-born negro children an exceedingly limited experience of my own may serve to throw a ray of light upon what at present seems an open question. Several years ago when attending midwifery for the charity of the London Hospital I attended a fair, buxom Englishwoman and to my astonishment at the time I found a strong and healthy baby upon the bed which was in every way perfect but looking as if just out of walnut pickle. Upon interrogating the mother she informed me that her husband was a man of colour and also that I probably might know him, as he was a vendor of "the perfumes of Araby" and India which he sold about the East-end of London. I was then able to call the husband to my memory and well remembered him as a man of similar colour to the baby although he was not a negro. Now if a walnut-coloured baby can be born having a walnut-coloured father and a fair-coloured English mother, I think it fair to assume that a baby born whose parents are both negroes will in all probability be even darker than the walnut baby it was my good fortune to bring into the world.

I am, Sirs, yours faithfully,

London, S.W., Nov. 29th, 1898. ALBERT S. MORTON, M.D.

To the Editors of THE LANCET.

SIRS,—I see from an annotation in THE LANCET of Nov. 26th that there is some difference of opinion on the colour of newly-born children of African parentage and this is not very surprising to those who have any extensive experience in the matter. The fact is they are not, like Joseph's coat, of many colours, but of many shades of one colour. They are not white and they are not pink. You have often seen a newly cleaned calf's head in a window in the Strand. This is about the ground colour, but I have never seen them as white as this; rather this colour with a light splash of black ink on it. Or if you can imagine a new chamois leather in the hands of a groom which has almost all its yellow colour washed out and which has been once or twice washed in dirty water; this is the lightest shade. The colours may be from this to the colour of the same chamois leather after a month's constant use, the darker shades of grey hiding the yellow. The grey being dark the other dark parts of the body referred to in your article are a degree darker to a dark *black*; not blue and not lead colour. This is the condition I have seen in healthy, strong children. Where the child is unhealthy, where there is not good action of the lungs, and where there is some admixture of white blood this colour has always added to it various shades of black magenta or a black red. I have attended the same woman many times and the infants have never been of the same shade. This is my experience of sixteen years on the north coast of South America. I am, Sirs, yours faithfully,

Nov. 28th, 1898. GUIANA.

*** We fancy that the various shades of pigmentation in the young of animals which when adult are black or almost black are to be found throughout the animal kingdom and are not confined to human beings. Take, for instance, the hippopotamus which when full grown is of a very dark mahogany colour or almost black. Its young when newly born is of a greyish pink colour. According to Buckland, Mr. Petherick, the African explorer, captured a young hippopotamus about two days old near Khartoum. He was brought to England, being on his arrival there about eight weeks old. Not having been able to have a bath on the way home his skin was like the bark of an old tree, but after a course of warm baths in the Zoological Gardens "his skin soon began to get soft, slimy, and of a black pinkish colour" ("Curiosities of Natural History," Third Series).—ED. L.

RIVAL QUACKS.

IN the Queen's Bench Division on Dec. 2nd there was heard, before Mr. Justice Wills and a special jury, an action brought by Henry Doveton, a quack medicine vendor, against other quacks known as Dr. Williams of Pink Pills notoriety. The action was for false imprisonment and malicious prosecution. Doveton, it appears, had been charged by the defendants with selling pills as Dr. Williams's Pink Pills which were really his own. At Lincoln Assizes the grand jury ignored the bill as no witnesses appeared for the prosecution. Counsel for the defendants in the present trial said that this was owing to a mistake on the part of the witnesses as to when the trial came on, and the judge who had presided at these assizes was now unkind enough to say that he had thought at the time that the whole thing was an advertisement. Plaintiff, in giving evidence, said that he never said that his pills were those of Dr. Williams. As a matter of fact he carefully explained that they were not, but were much better. Mr. Justice Wills gave judgment against the plaintiff. So possibly, according to the old saw, honest men will come by their own.

MESSRS. ADAMS AND PARKES, medical accountants, &c., 8, John-street, Adelphi, have sent us a specimen of a pocket celluloid almanac which forms also a useful memorandum tablet. It is enclosed in a paper case stamped in imitation of crocodile skin.

E. C. will find references to the subject in our columns. The companies cannot be the willing agents of the homicidal parents, for it would not pay the companies if the majority of the infants insured with them died. Our correspondent is, we think, a little carried away by the tragedy of the subject.

M.D. Dunelm.—The Royal College of Surgeons of England might take notice of the matter in the first medical man's case if the publication is brought to their attention. The second author obtained his degree from Edinburgh and the university might be communicated with.

R. L. B.—The analysis does not present any unsatisfactory features, but under the circumstances mentioned it is desirable that further examination should be made at intervals so that periodical liability to contamination may be discovered or variation in composition detected.

Mr. Joseph Ward will find complete information concerning the regulations of both departments in the current Medical Directory, page 1843.

Mr. William Dalton.—We do not know any financiers and do not appreciate the merits of the invention from the description forwarded to us.

L. M. should write to the chief constable of the county, giving evidence and substantiating the accusation of favouritism.

X. (Birmingham).—We do not know the book to which our correspondent refers.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Dec. 8th, 1898.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Wet Bulb.	Dry Bulb.	Remarks at 8.30 A.M.
Dec. 2	29·71	WSW	...	61	57	49	50	53	Cloudy
,, 3	29·81	S.W.	0·05	70	56	50	51	52	Raining
,, 4	29·91	S.W.	...	79	59	52	53	55	Fine
,, 5	30·03	S.W.	...	59	57	54	54	55	Raining
,, 6	30·02	S.W.	...	67	58	54	54	56	Overcast
,, 7	29·69	N.W.	0·96	51	49	48	48	48	Raining
,, 8	30·01	N.W.	0·63	57	48	43	44	46	Overcast

During the week marked copies of the following newspapers have been received: *Croydon Guardian, Western Mercury, Glasgow Herald, Times of India, Durham Advertiser, Pioneer Mail, Builder, Eastern Morning News, Architect, East Essex Advertiser, Scotsman, Citizen, Leicester Post, Liverpool Daily Post, Scarborough Evening News, Yorkshire Post, Derby Telegraph, Irish News and Belfast Morning News, Leeds Mercury, Manchester Guardian, South Wales Daily News, Rugby Advertiser, Bristol Mercury, Brighton Gazette, Cheltenham Free Press, Westmorland Gazette, Sheffield Times, Keene's Bath Journal, Cambridge Express, Birmingham Gazette, Sussex Daily News, Midland Counties Express, Wigan Examiner, Grantham Journal, High Peak News, Bridlington Free Press, Dundee Advertiser, Whitehaven News, Sell's Commercial Intelligence, Sanitary Record, Liverpool Courier, Western Daily Press, Local Government Chronicle, Reading Mercury, City Press, Hertfordshire Mercury, Local Government Journal, Surrey Advertiser, Kentish Mercury, Toronto Mail, New Century Review, Gloucester Standard, St. Helens Advertiser, Pontefract Express,* &c., &c.

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